AD-A043 354 FLEET WEATHER FACILITY SUITLAND 4D ANTARCTIC ICE CHARTS 1975-1976. (U) 1976 UNCLASSIFIED										F/G 8/12			
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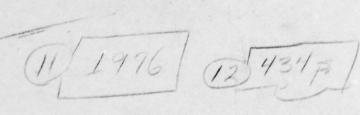
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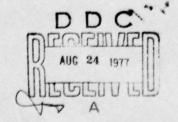


## ANTARCTIC ICE CHARTS

1975 - 1976







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## FOREWARD

The U.S. Navy has a long and colorful history of polar exploration and currently is an active participant in the growing national activity in the Arctic and Antarctic. The strategic importance and increased demand for the natural resources of these areas has resulted in a greater requirement for environmental information.

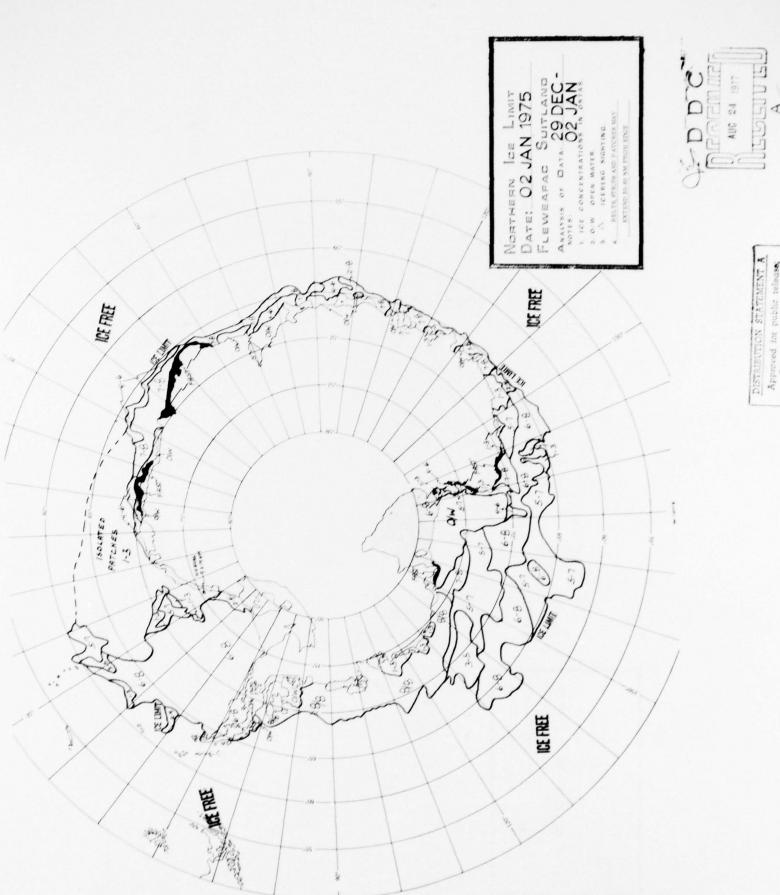
Until a few years ago, reliable sea ice information in the polar regions was based on a relatively few shore station and ship reports augmented by limited aerial reconnaissance data. These data were further restricted to the relatively small areas observed primarily during the ship operating season. The principal aim of this publication is to provide operators and researchers with historical weekly hemispheric analyses of sea ice conditions derived principally from satellite imagery supplemented by conventional observations.

The advent of high resolution satellite imagery combined with the ground truth of conventional observations has only recently provided description of the polar ice fields on a semi-synoptic scale. Since 1970, the Fleet Weather Facility at Suitland, Maryland has prepared operational analyses and forecasts of sea ice conditions in the Arctic and Antarctic for the Department of Defense and various other users. The results of these initial efforts are contained herein.

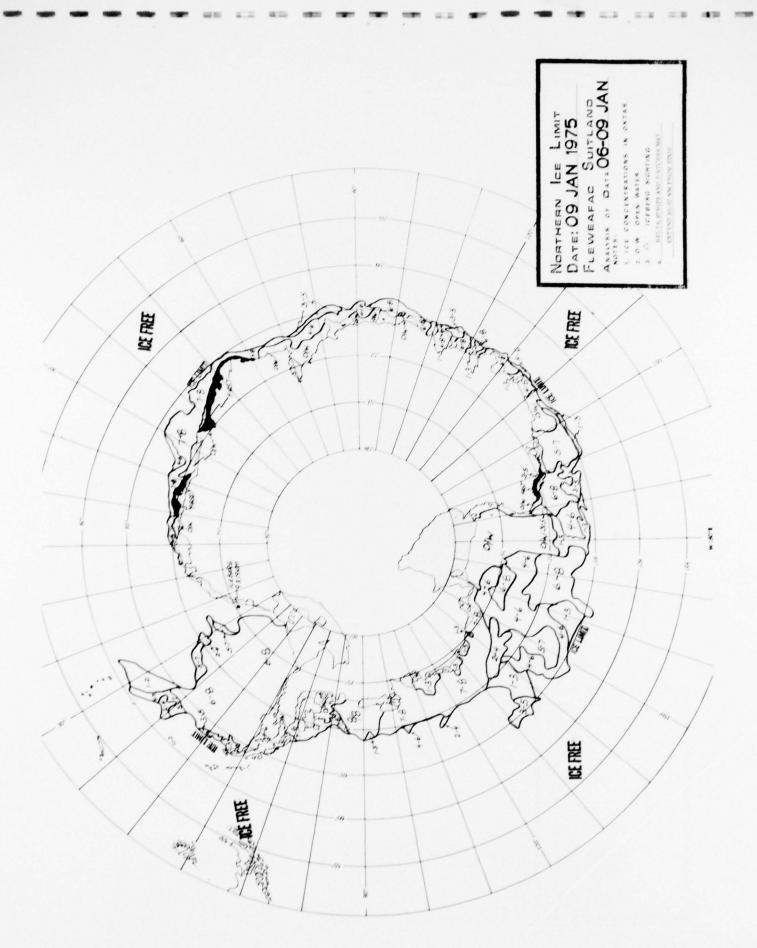
The charts were constructed by Navy ice analysts under operational time constraints from satellite imagery and conventional data. Reanalysis with late data was not normally attempted; rather the current analysis was prepared incorporating this to the extent possible. The analysis was compared with available climatology in an attempt to eliminate gross errors. Scanning radiometer imagery, visual and infrared, from the National Oceanic and Atmospheric Administration (NOAA) satellites and microwave radiometer data from the NIMBUS V research satellite were the primary data sources. Limited use of the Earth Resources LANDSAT and Defense Meteorological Satellite Program (DMSP) imagery as well as conventional observations were utilized. The 19.35 GHZ microwave radiometer with 25 kilometer (KM) resolution aboard NIMBUS V provided an ice edge and limited inner pack conditions. This was the basic data source during the polar night and over areas dominated by persistent cloud cover. During the seasons with adequate light, visual data from the Very High Resolution Radiometer (VHRR) with 1 KM resolution and the 4 KM resolution data from the Scanning Radiometer aboard NOAA 2, 3, and 4 satellites were utilized. Infrared radiometer data was of limited value primarily due to seasonally small water-ice temperature differences.

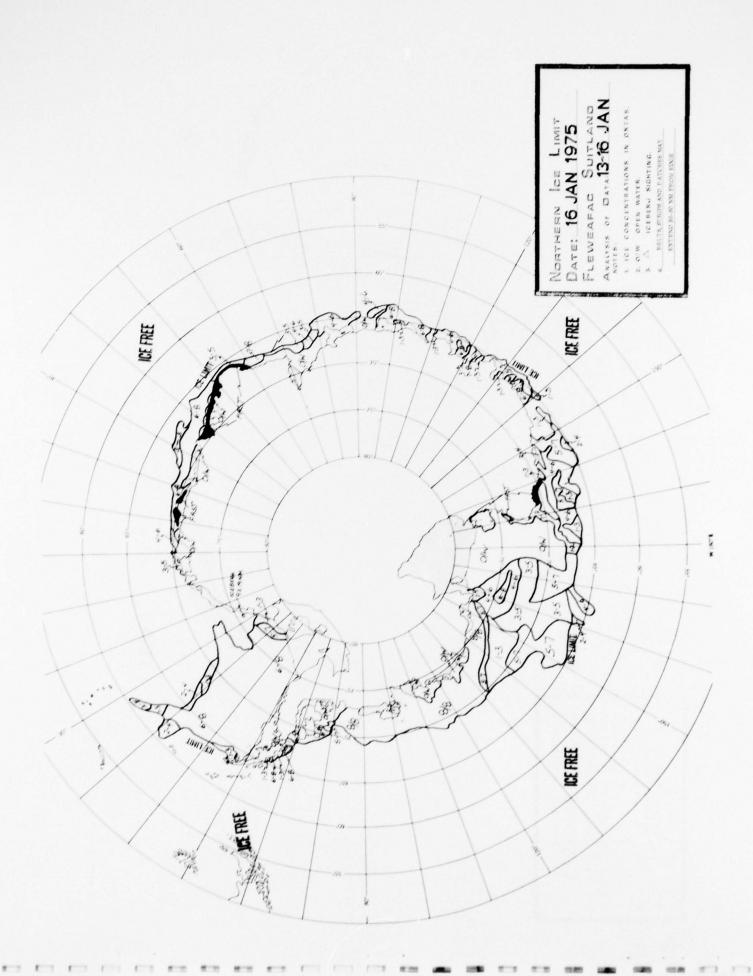
The user of this publication is reminded that the information presented reflects an initial effort prepared for operational use and should temper his application accordingly. Comments regarding any aspect of the analysis effort are welcomed.

VINCENT W. ROPER Commander, U. S. Navy Commanding Officer Fleet Weather Facility Suitland, Maryland

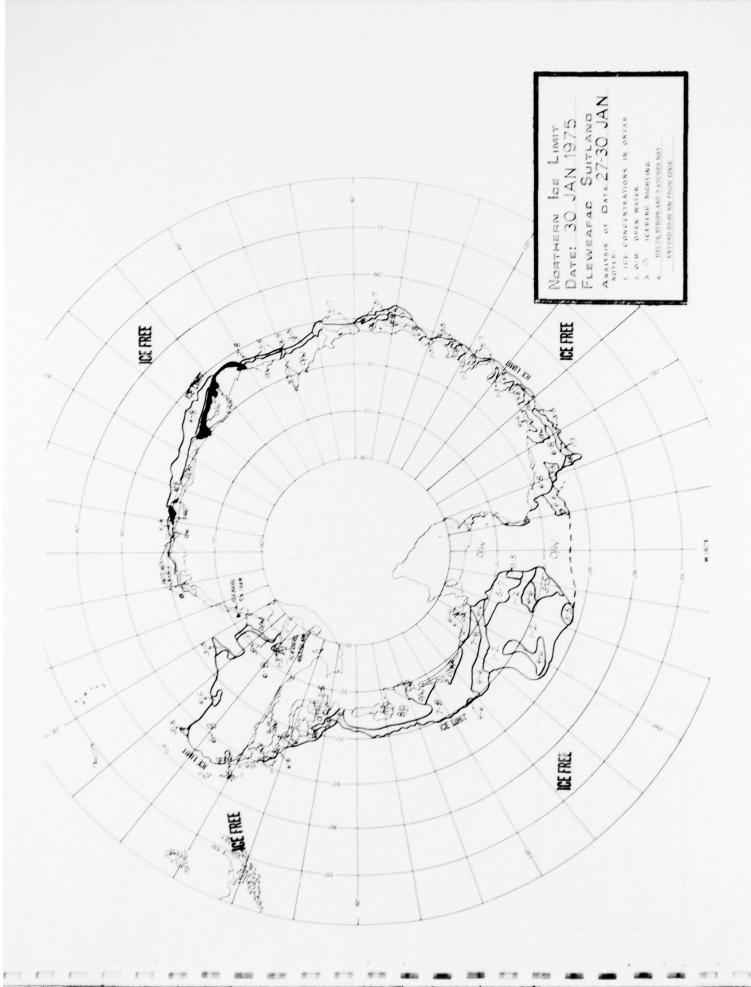


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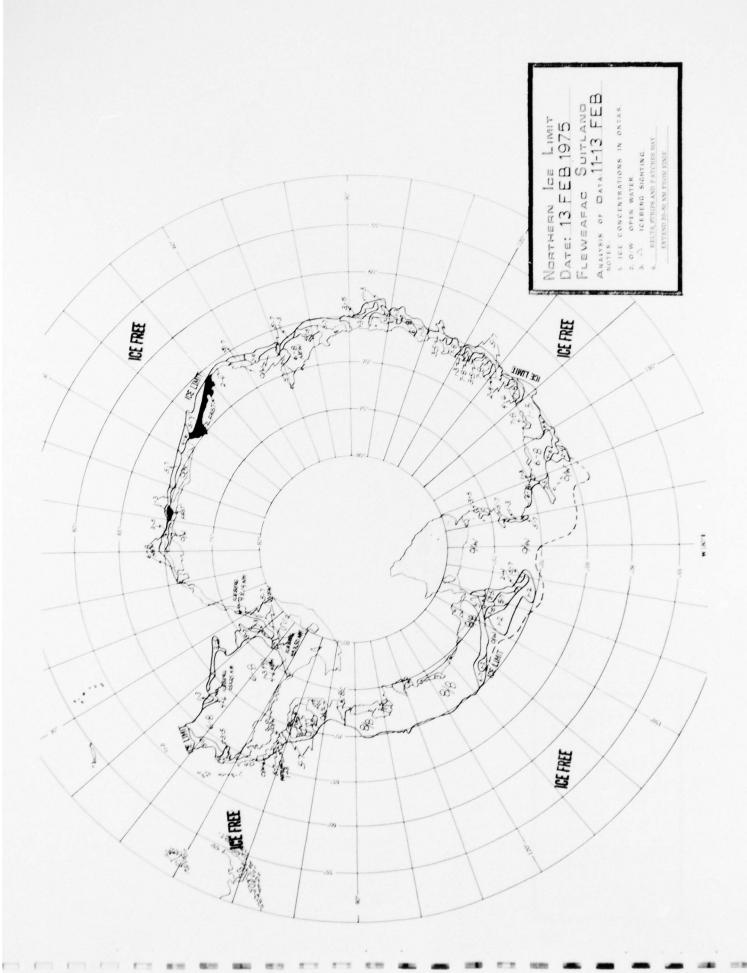




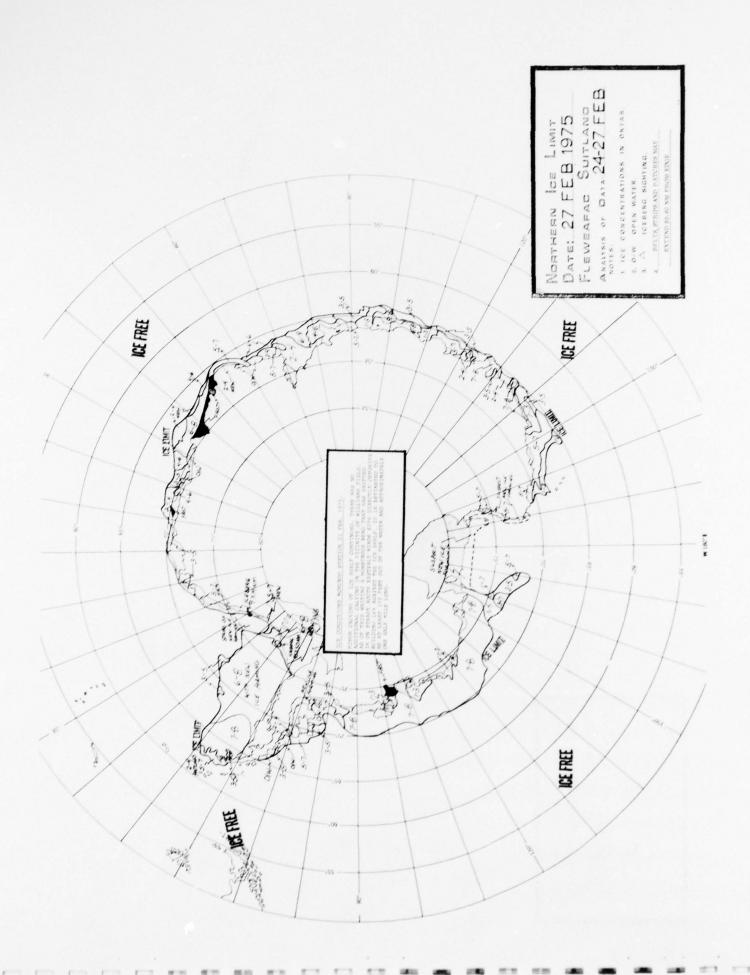
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FLEWEAFAC SUITLAND
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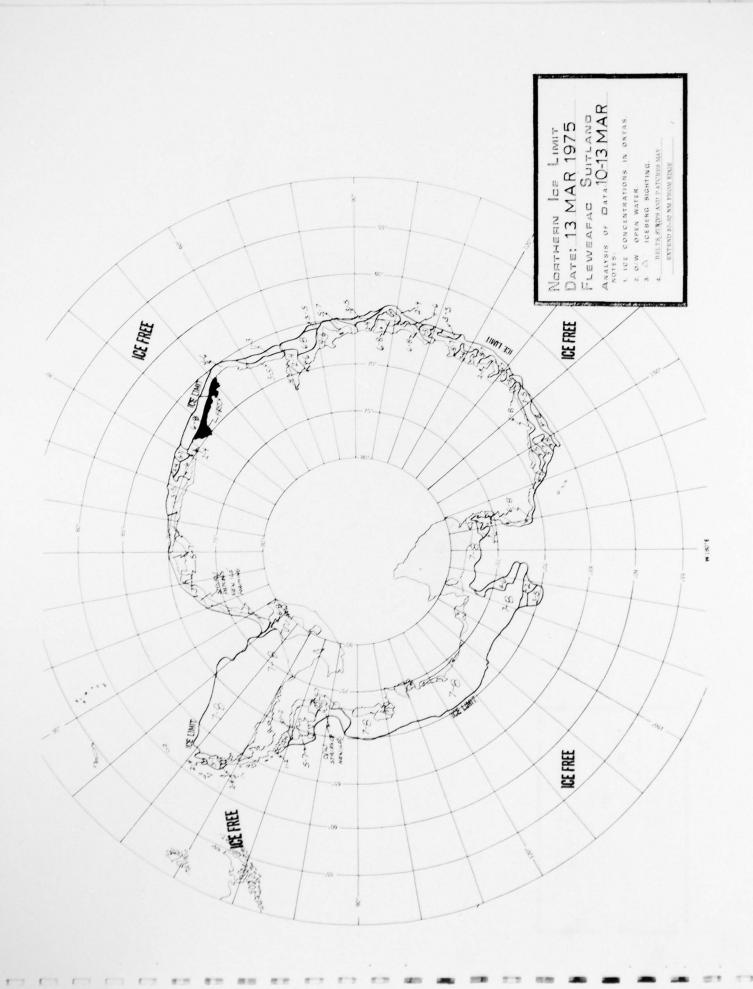
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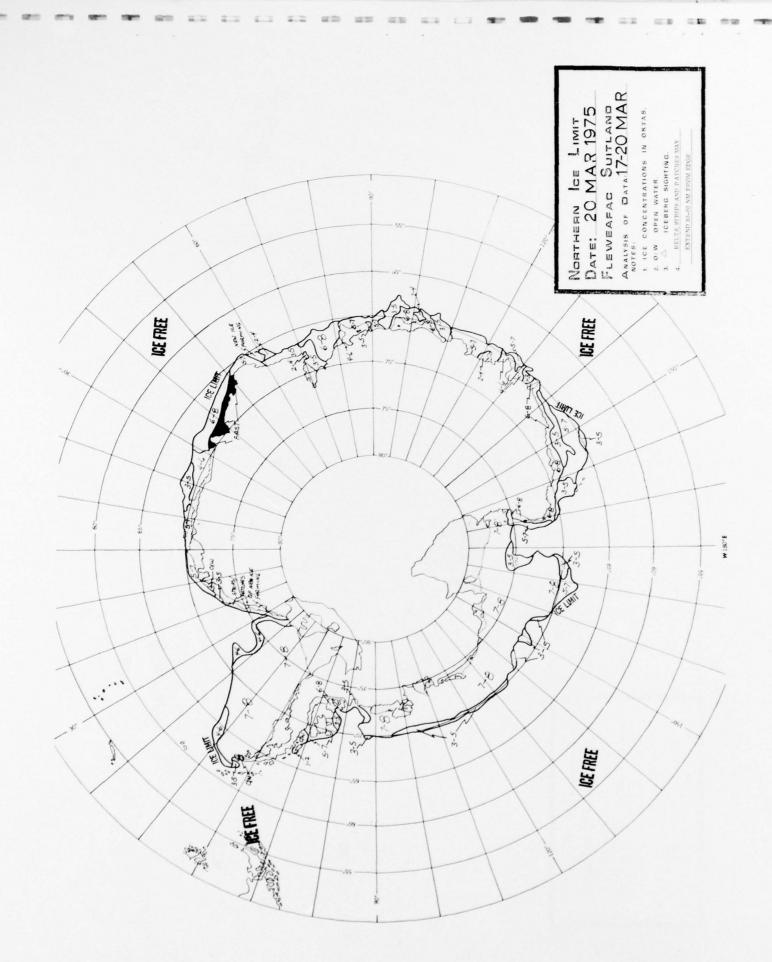


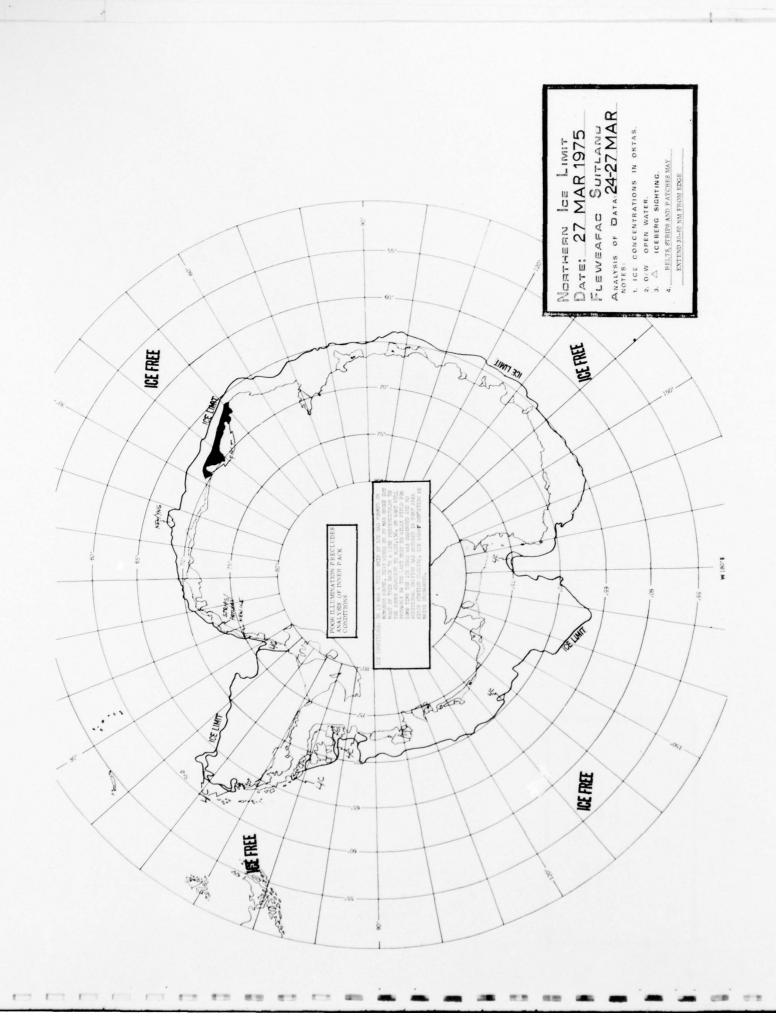
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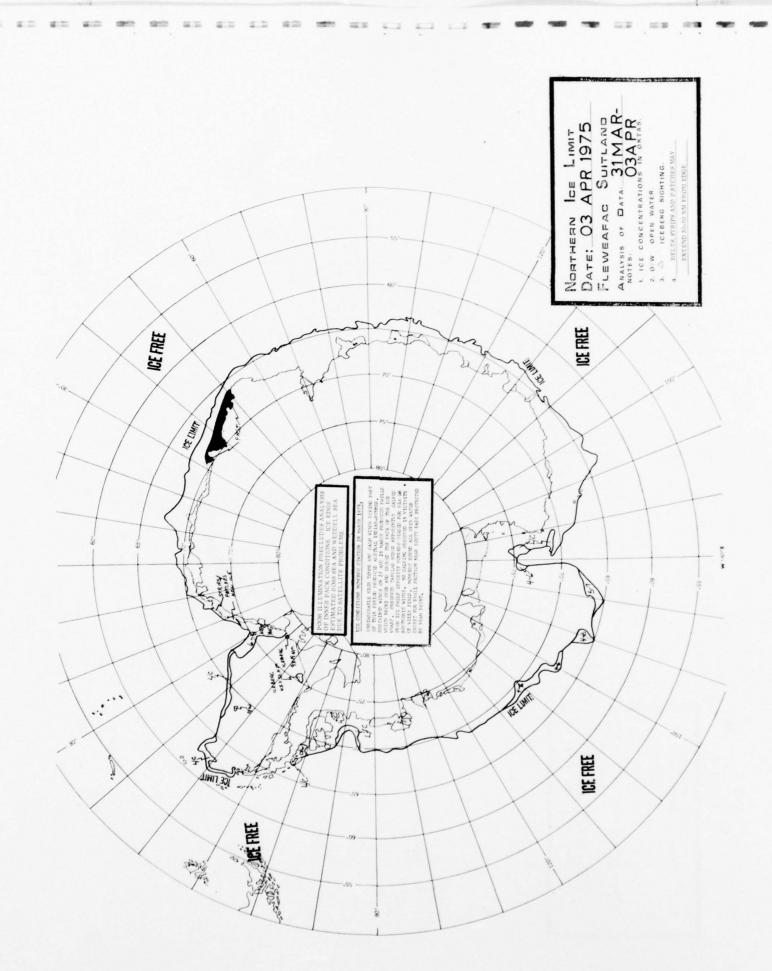
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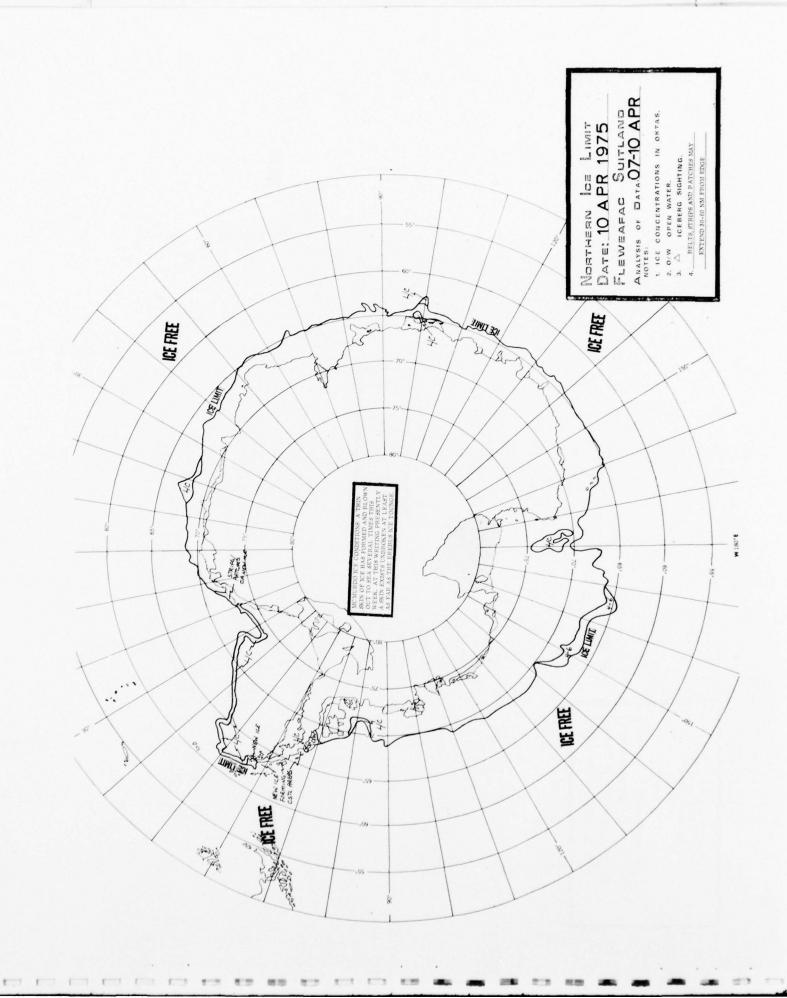
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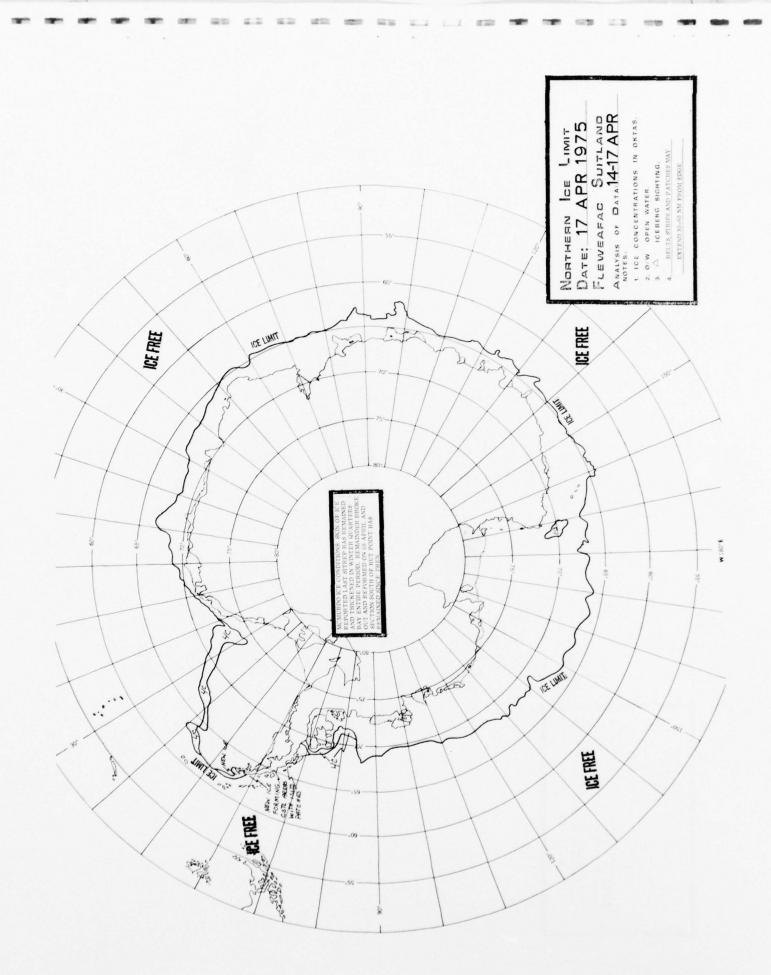


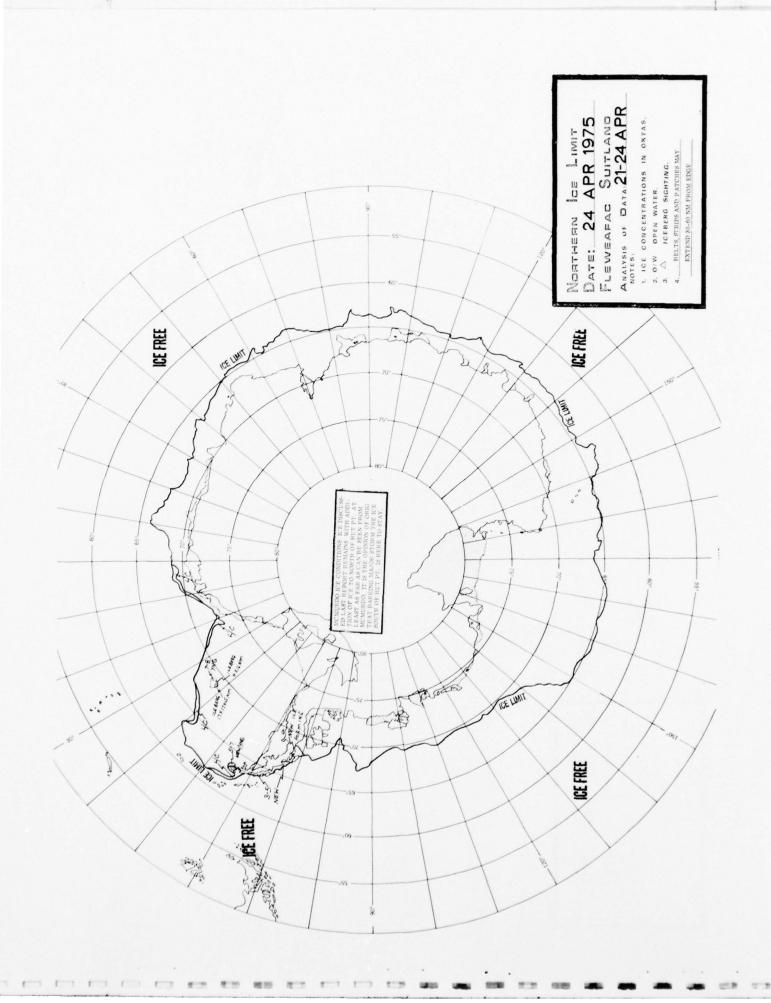


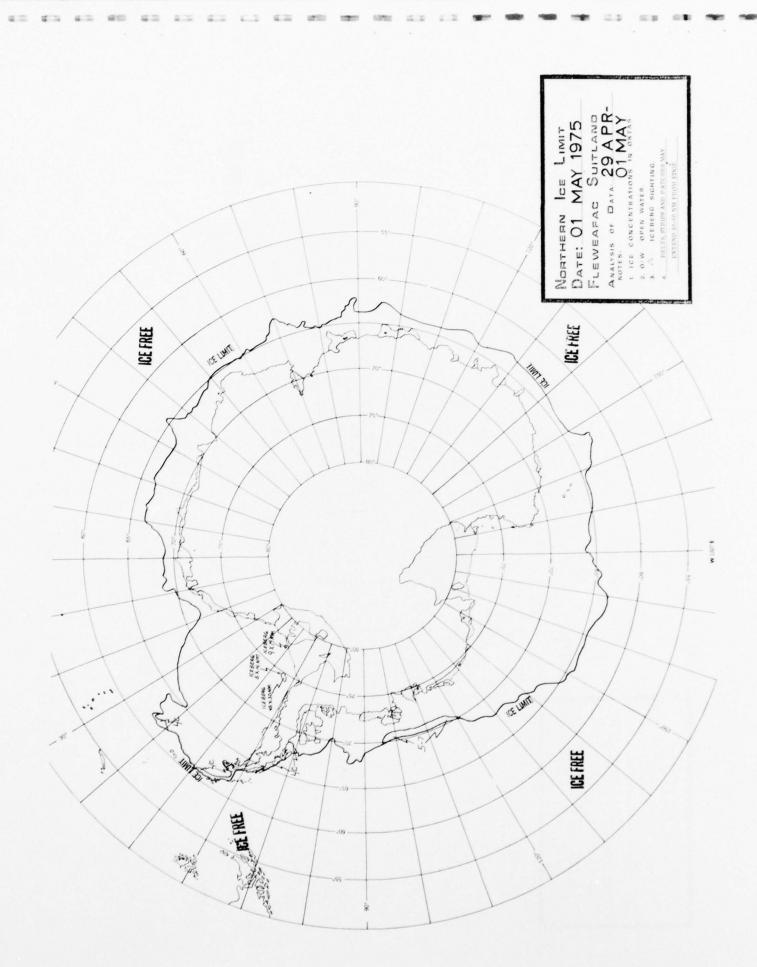


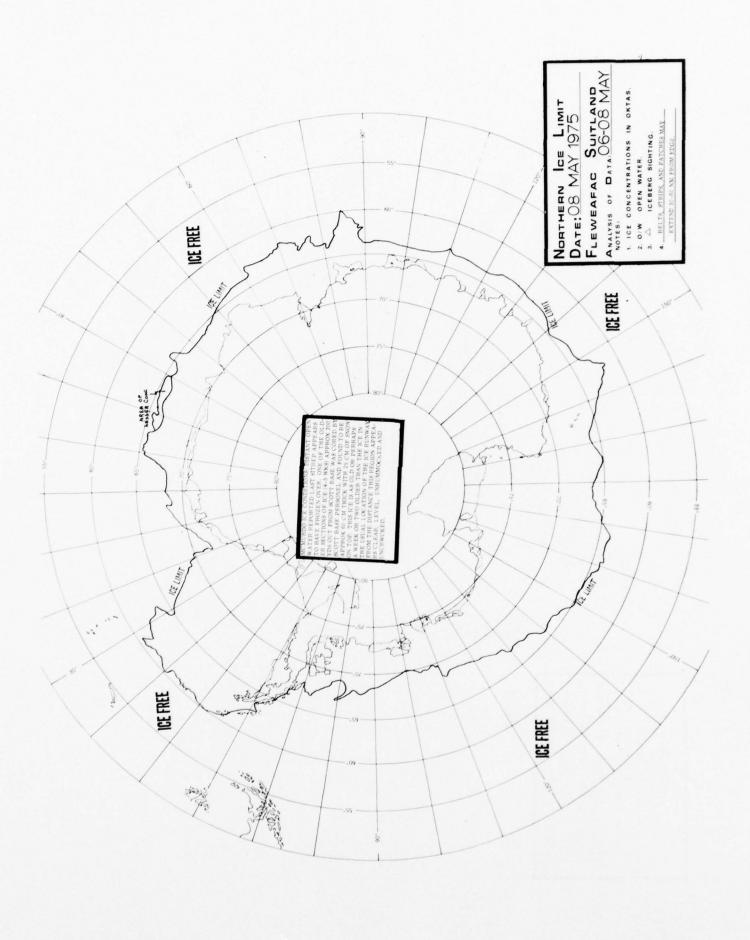


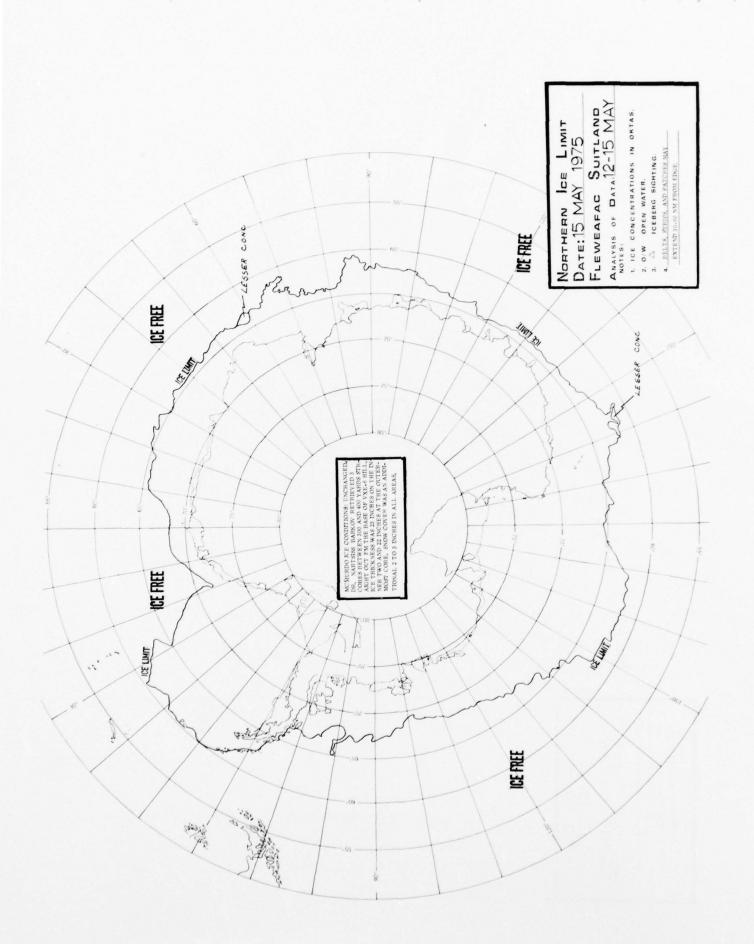




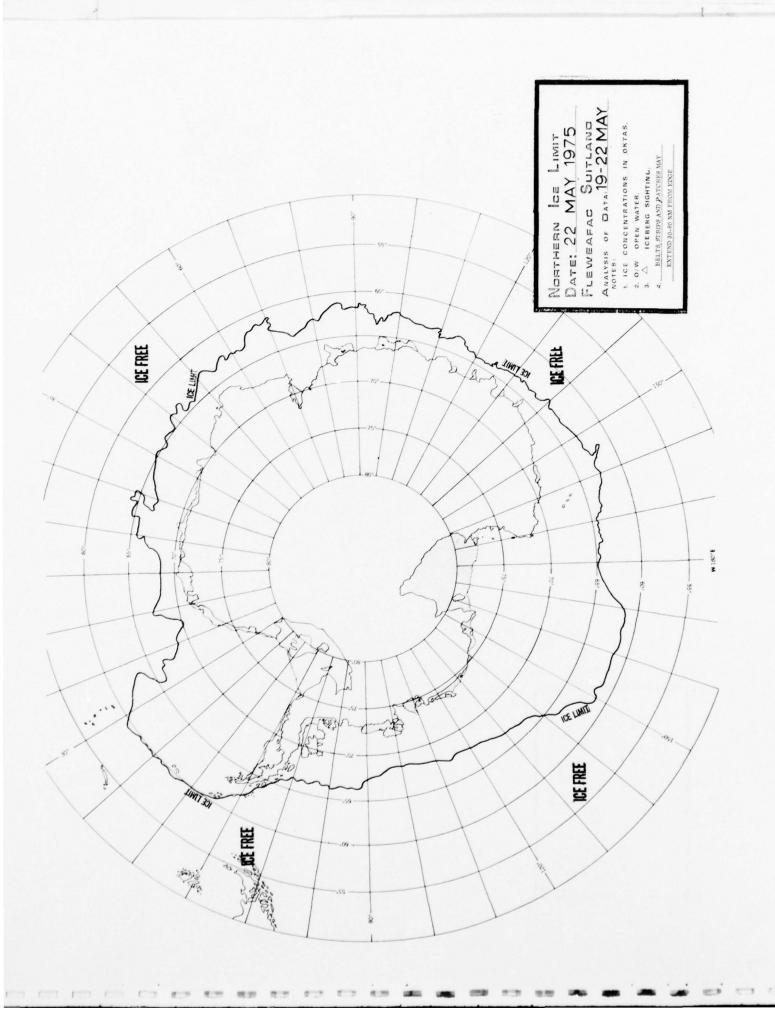


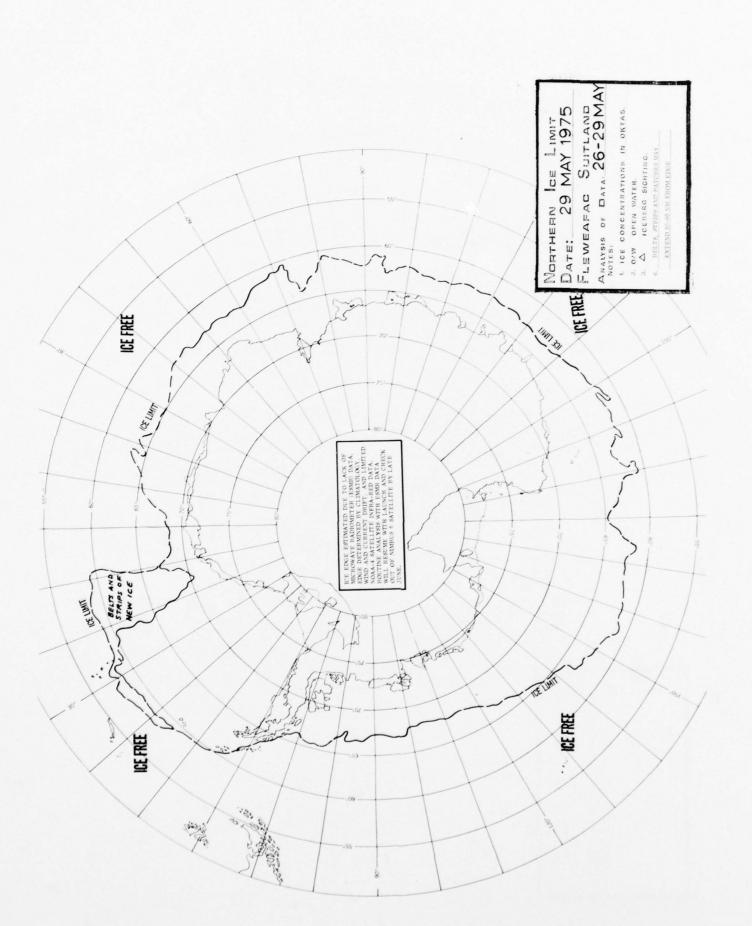






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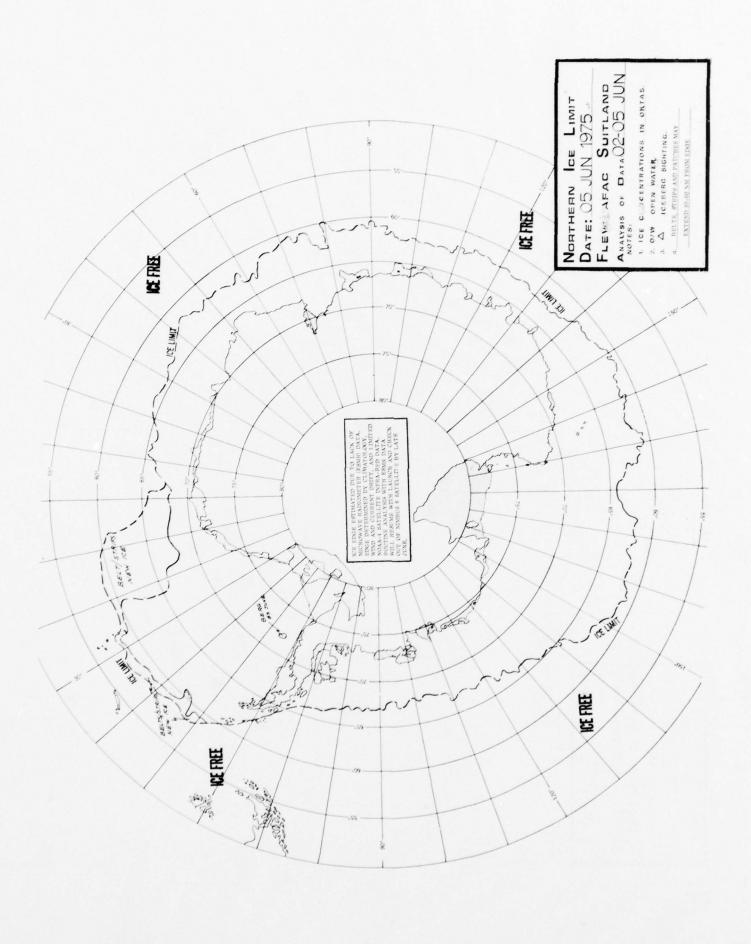


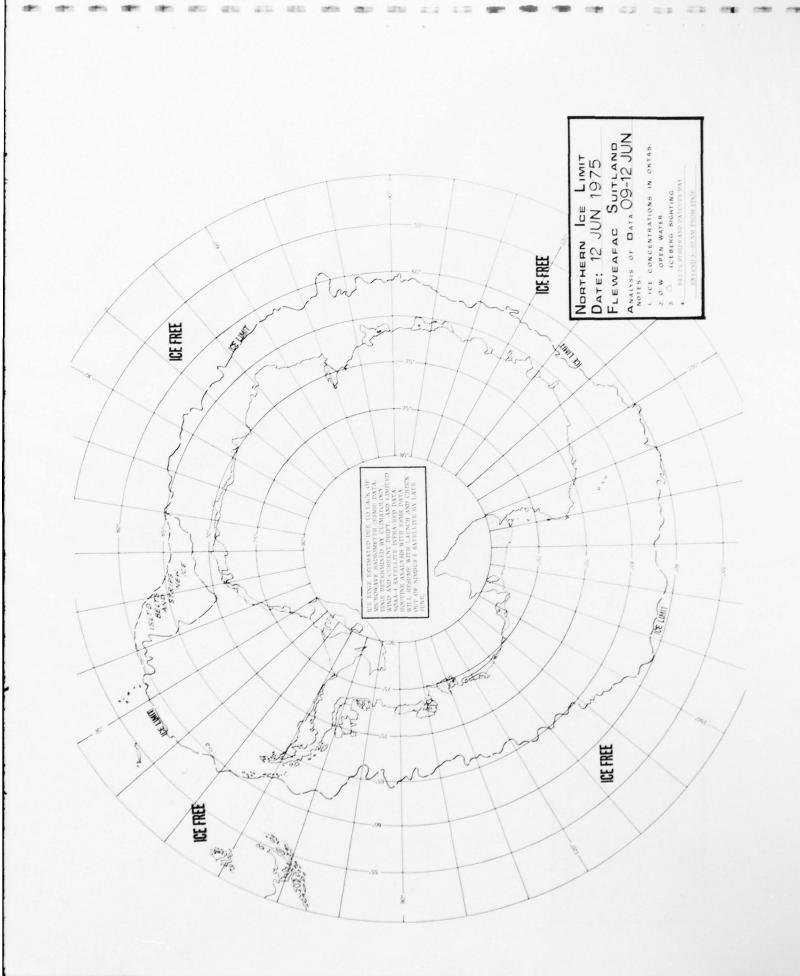


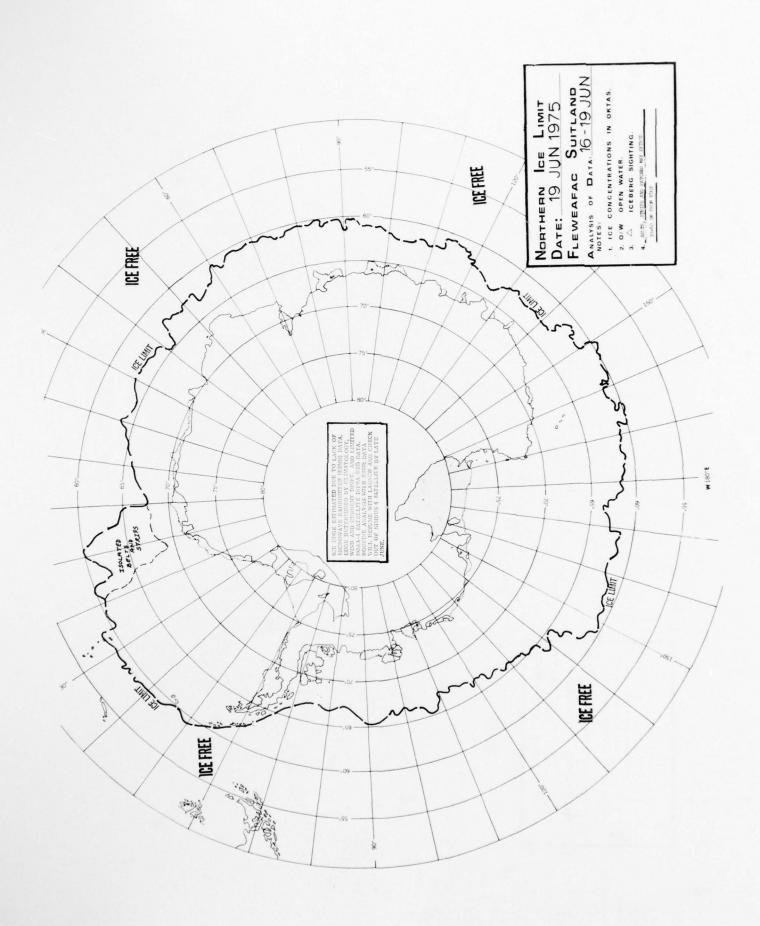
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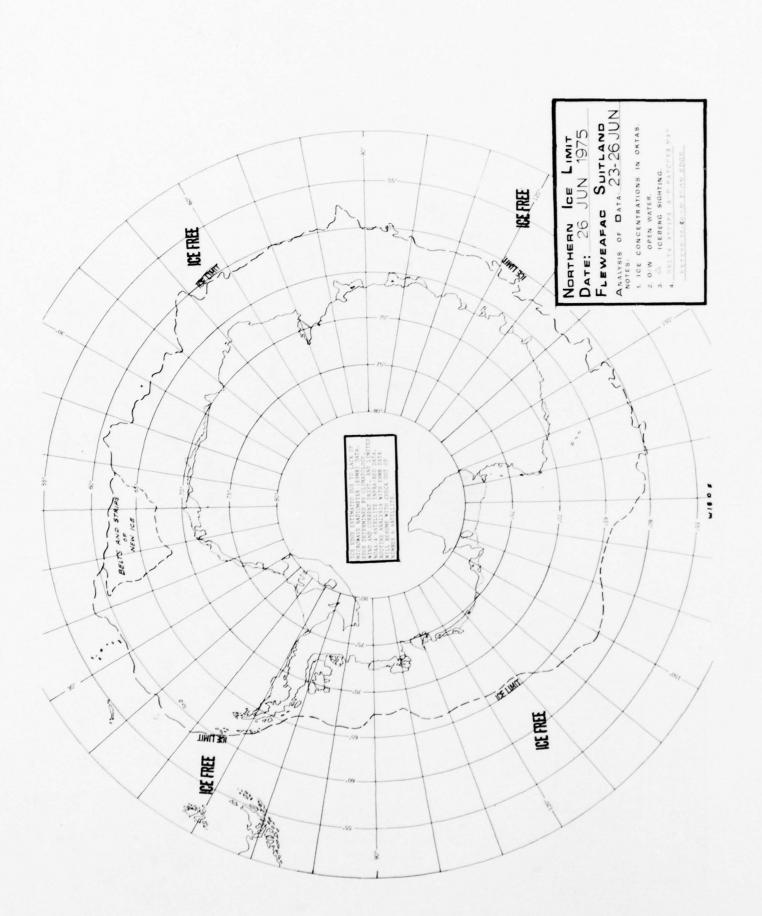
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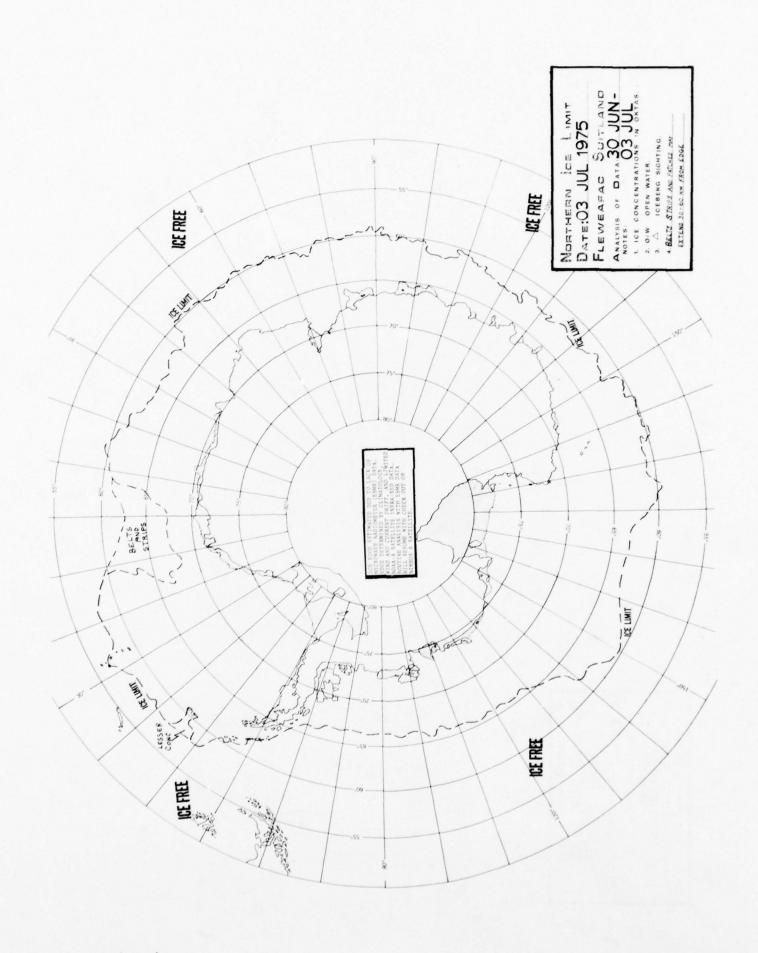








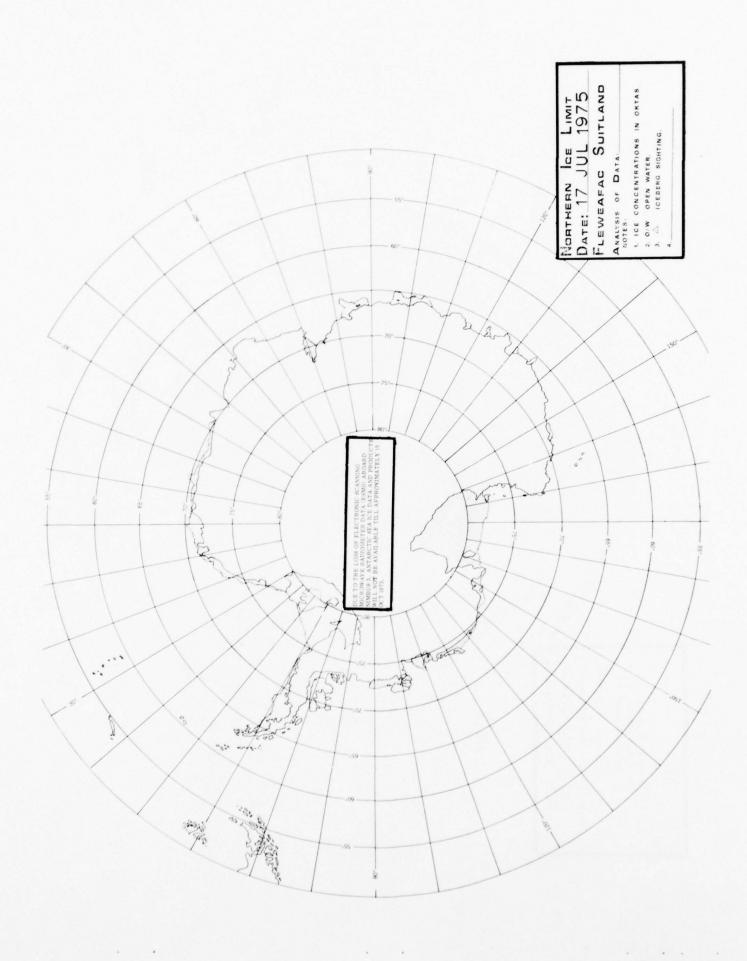
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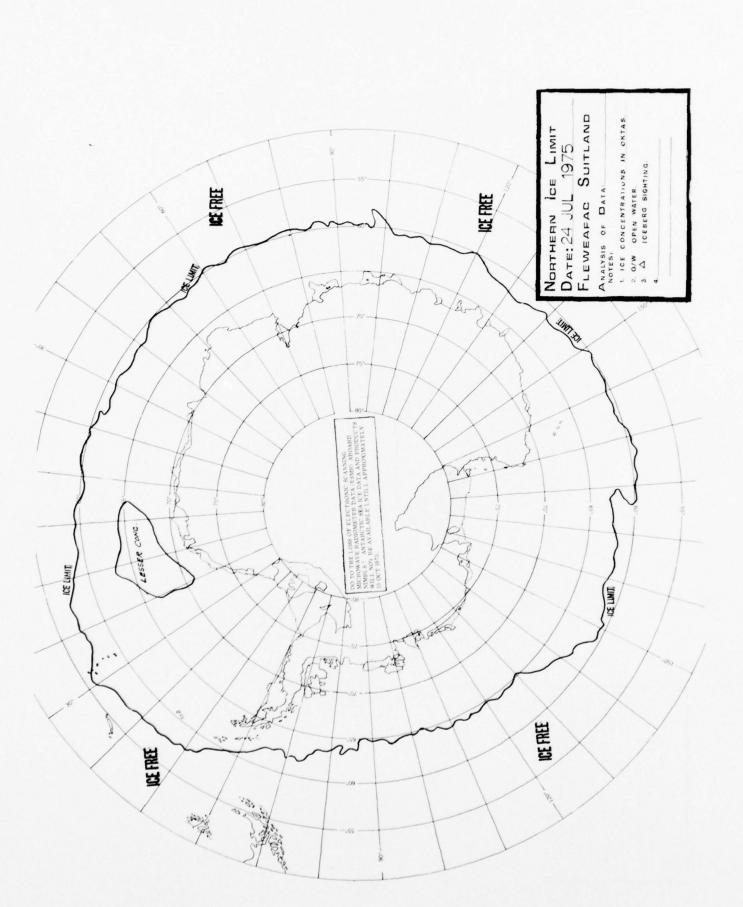


DATE: 10 JUL 1975

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ANALYSIS OF DATA OZ-10 JUL
NOTES:
1. ICE CONCENTRATIONS IN OKTAS.
2. O'W OPEN WATER.
3. A ICEBERO SIGHTING.
4. BELLE, STRIPS AND PATCHES WAY 1975 NORTHERN OF ICE LIMIT V DE FREE ICE FREE Jasem J. Vg. ICE LIMIT THE LIMIT OF FREE ICE LIMIT

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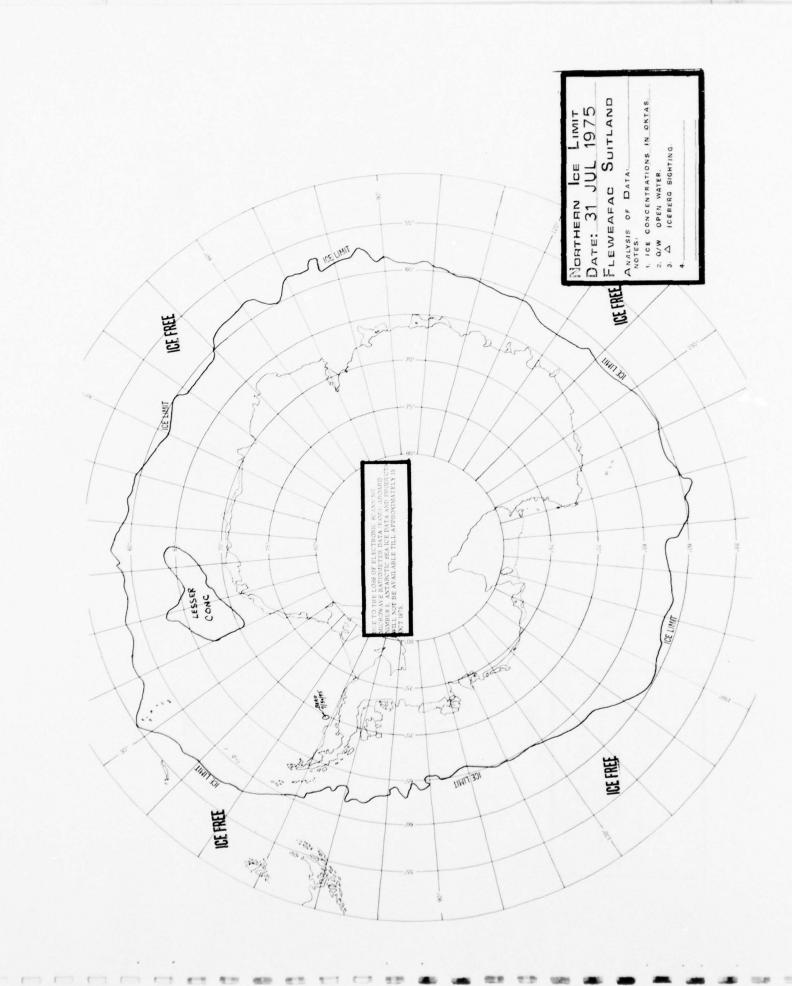
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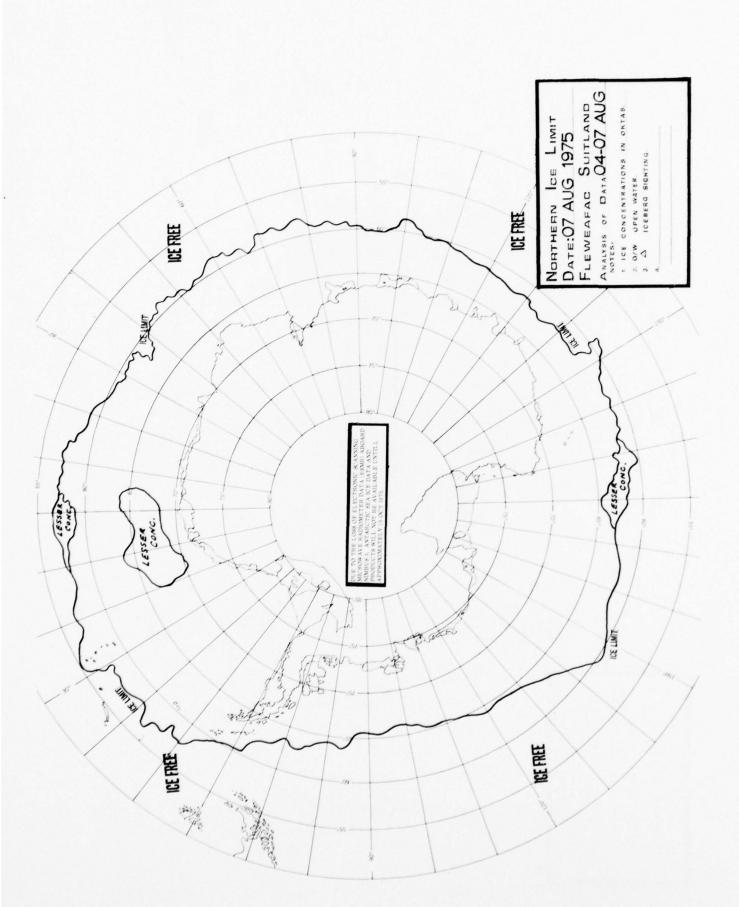
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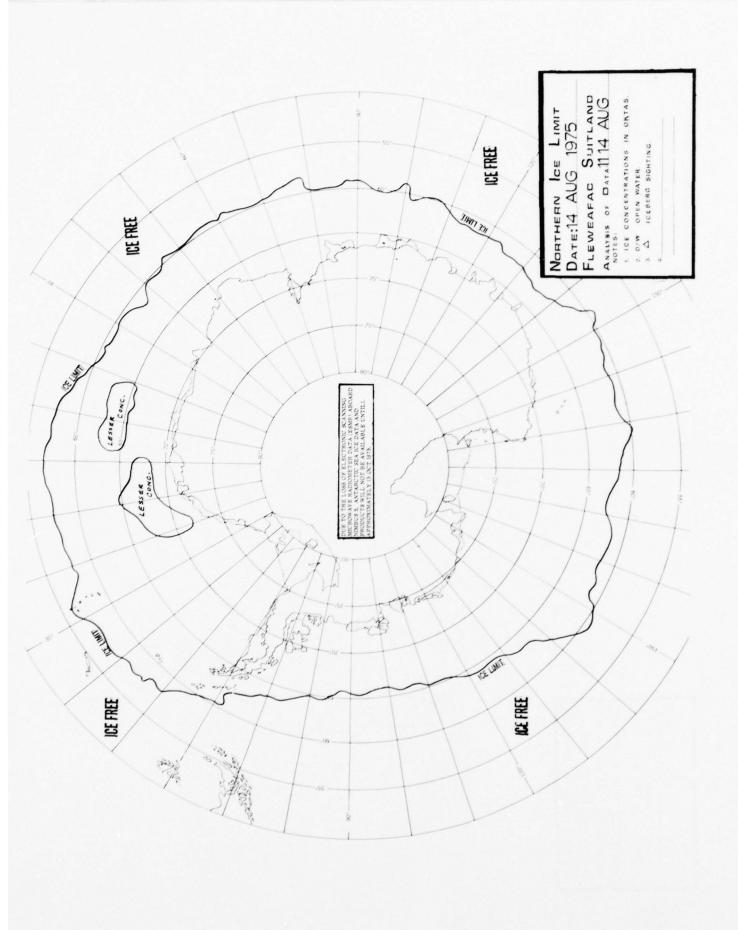


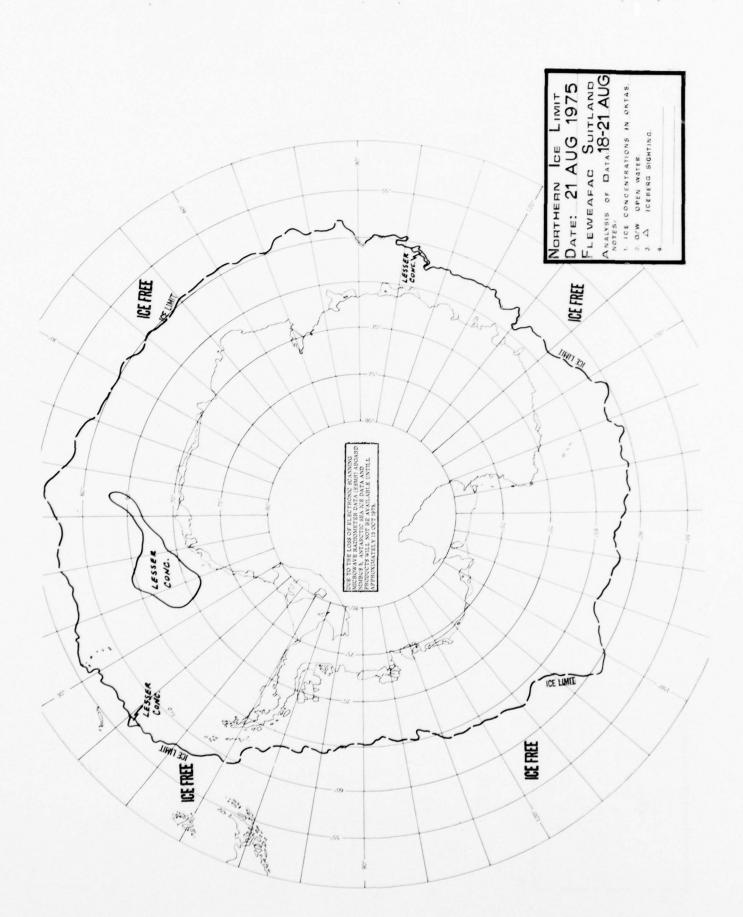


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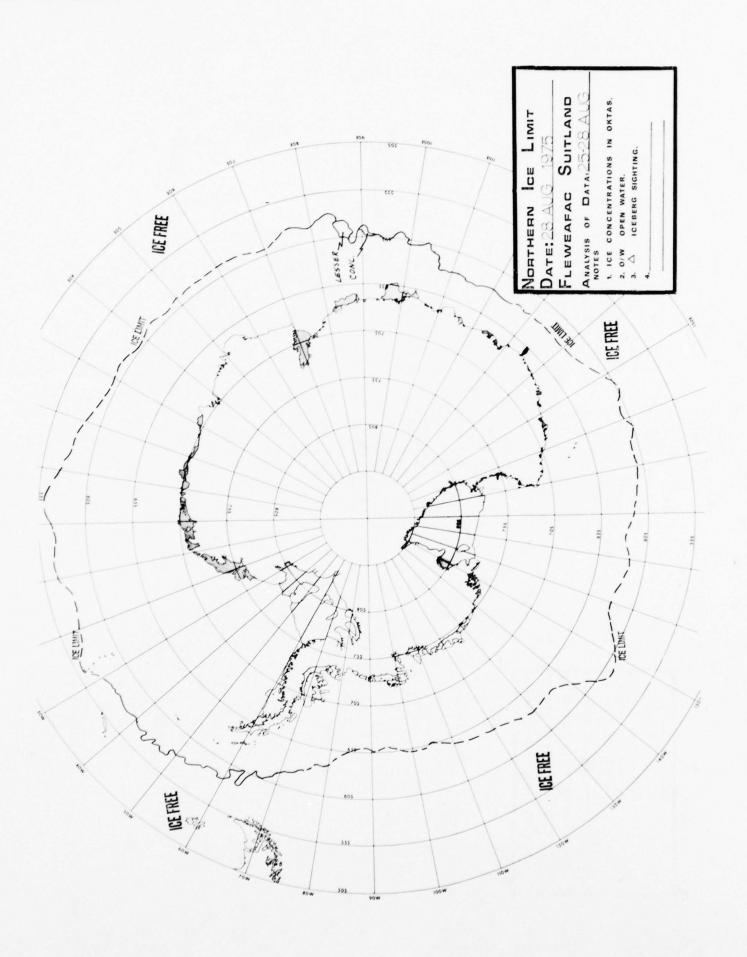
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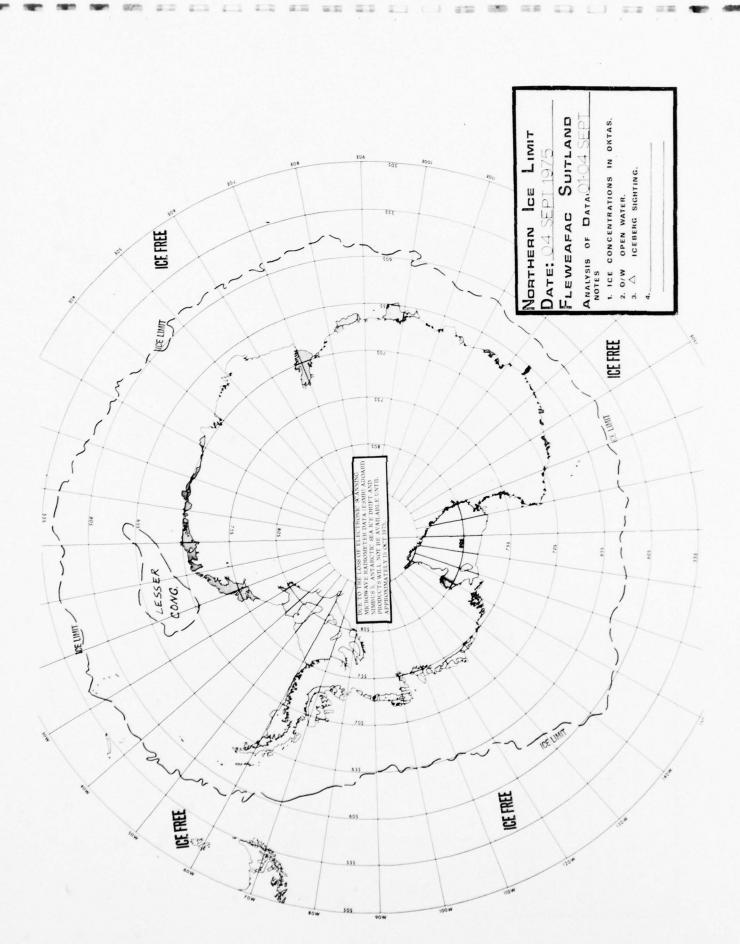
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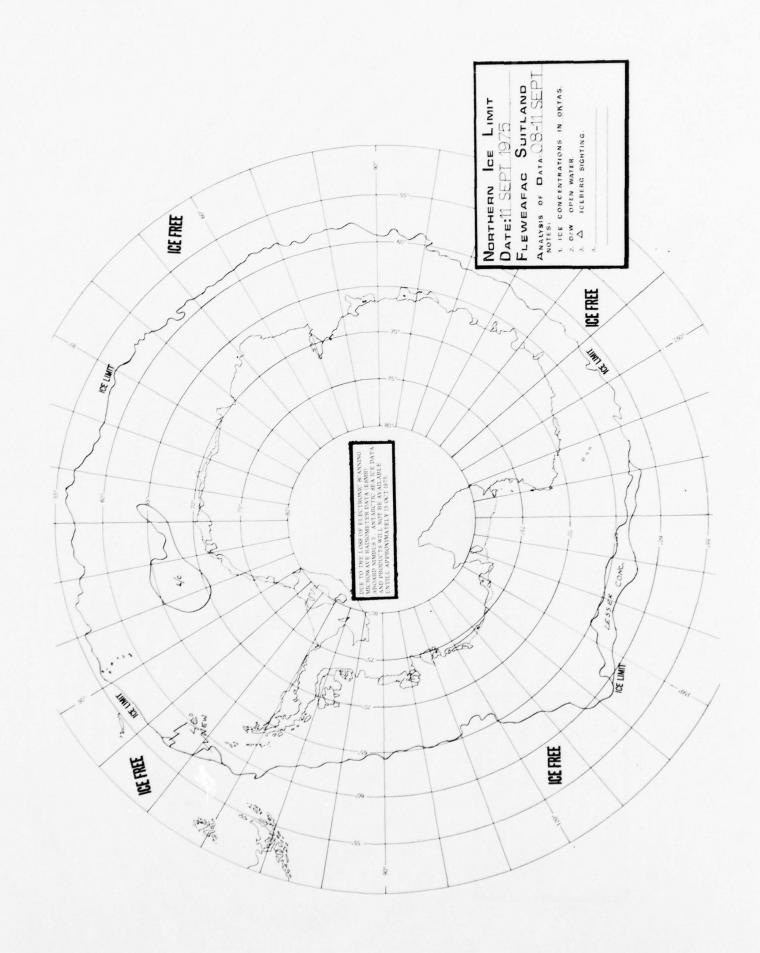


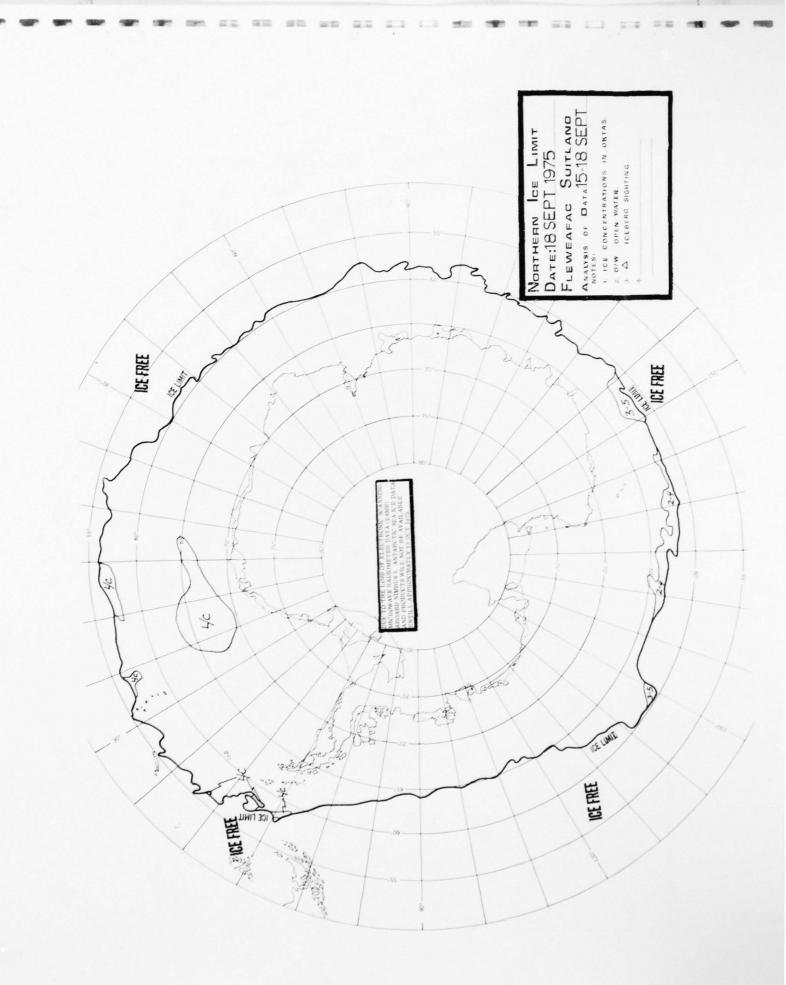


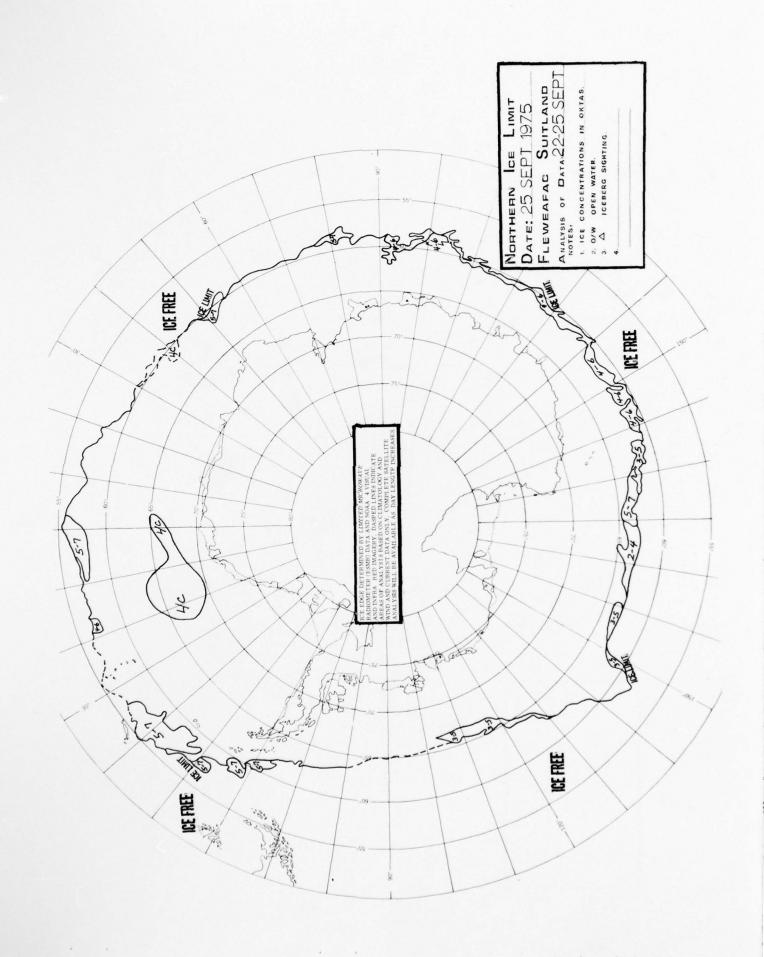
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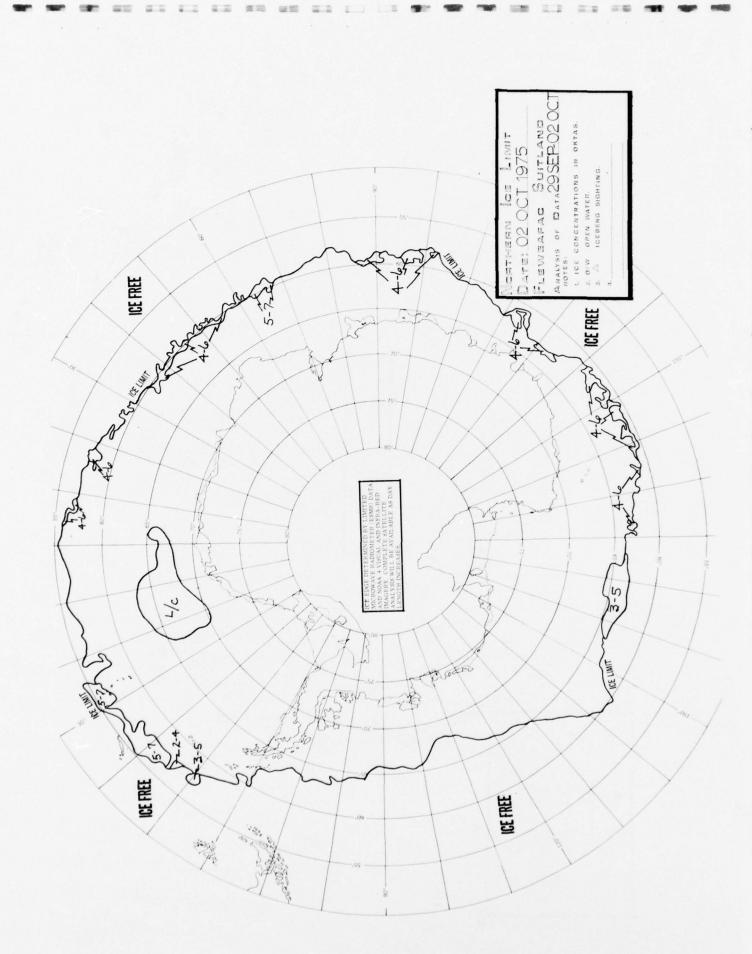


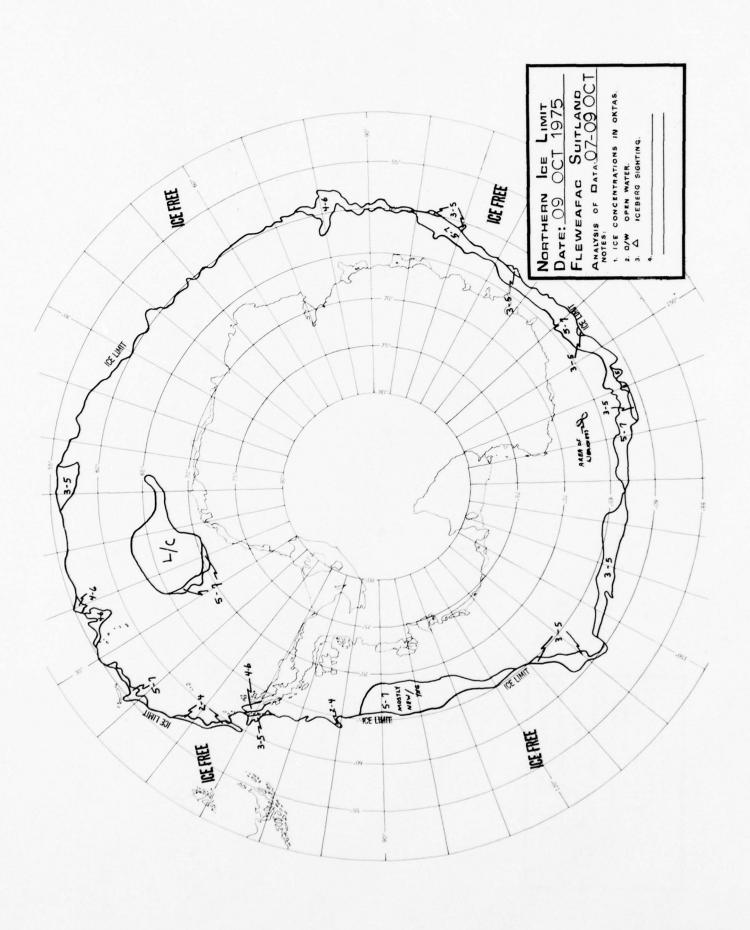






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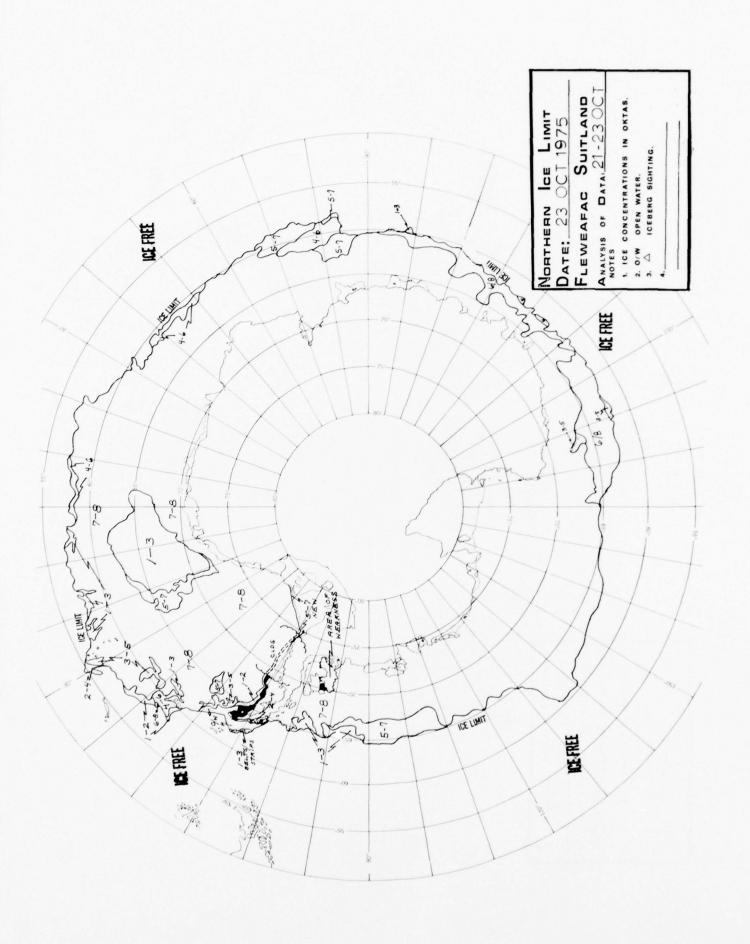


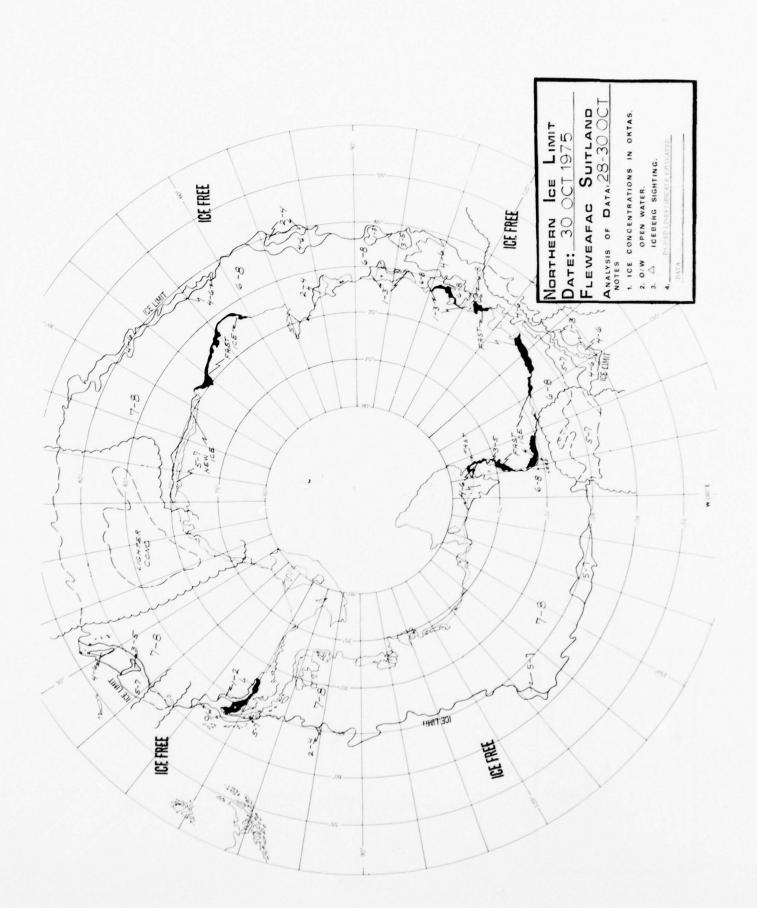
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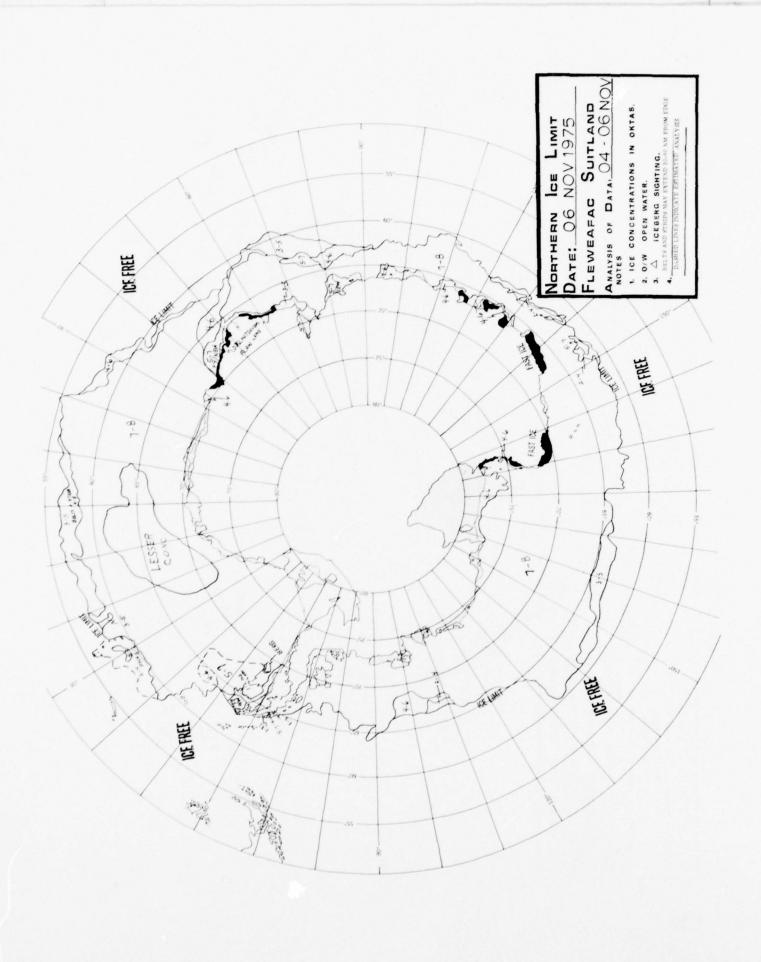
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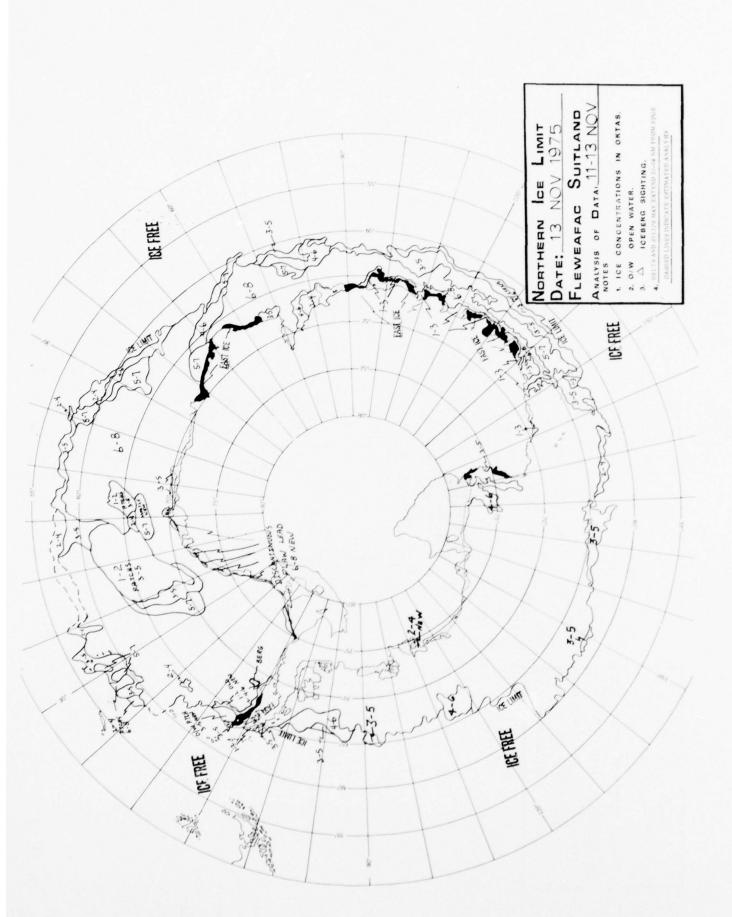
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DATE: 16 OCT 1975
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2. O/W OPEN WATER.
3. \( \Delta \) ICEBERG SIGHTING. E FIE 5.74 路開 Today. ICE LIMIT ICE FREE

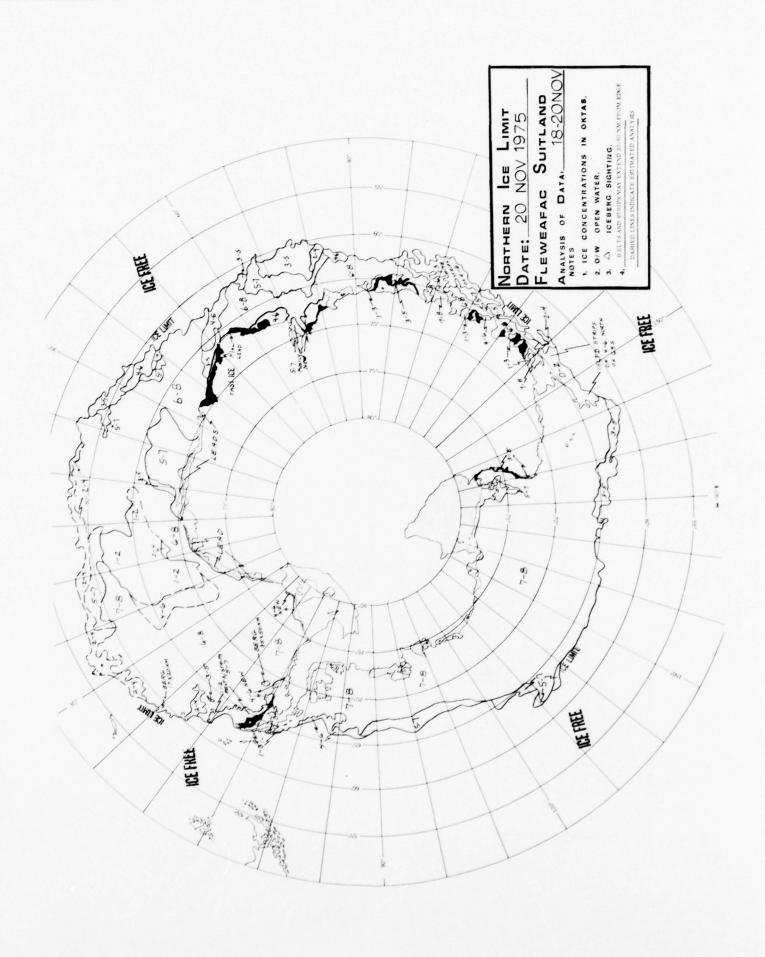
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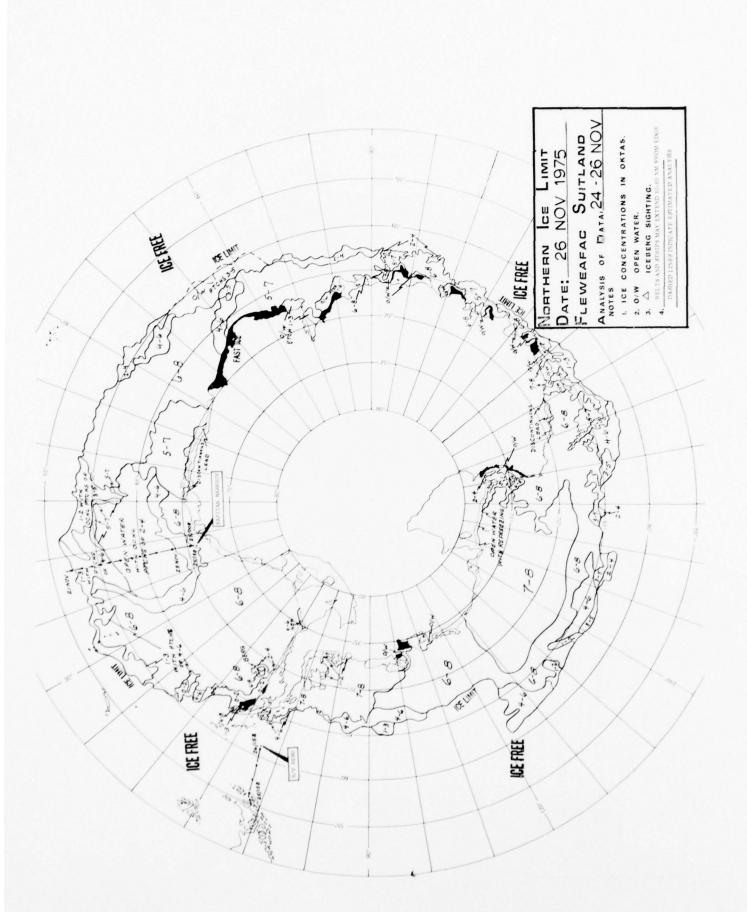


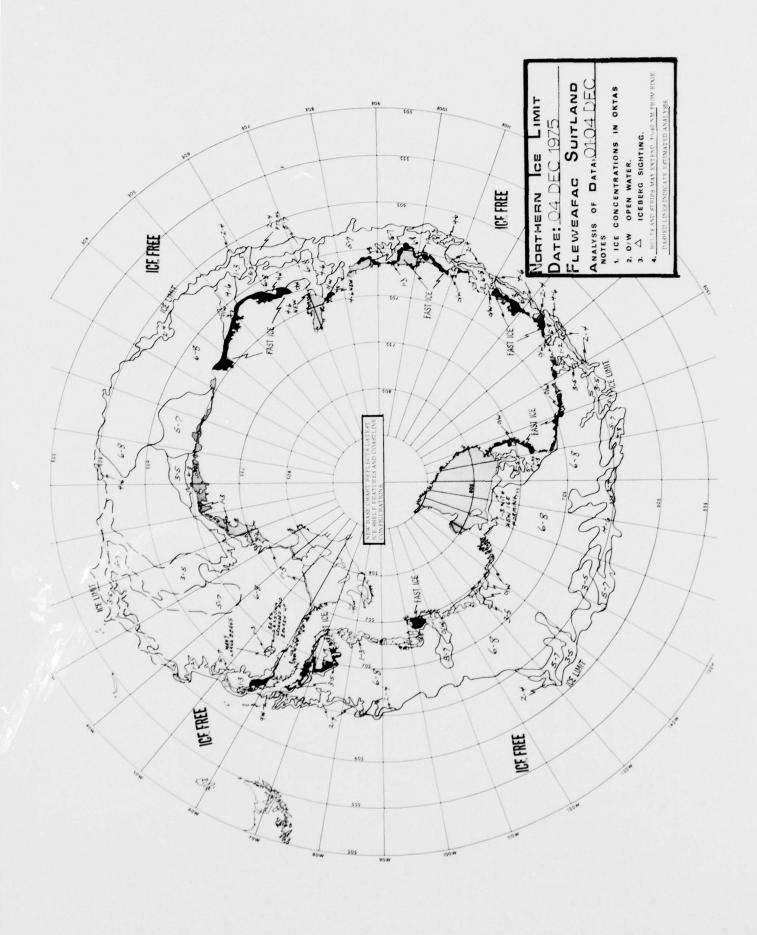


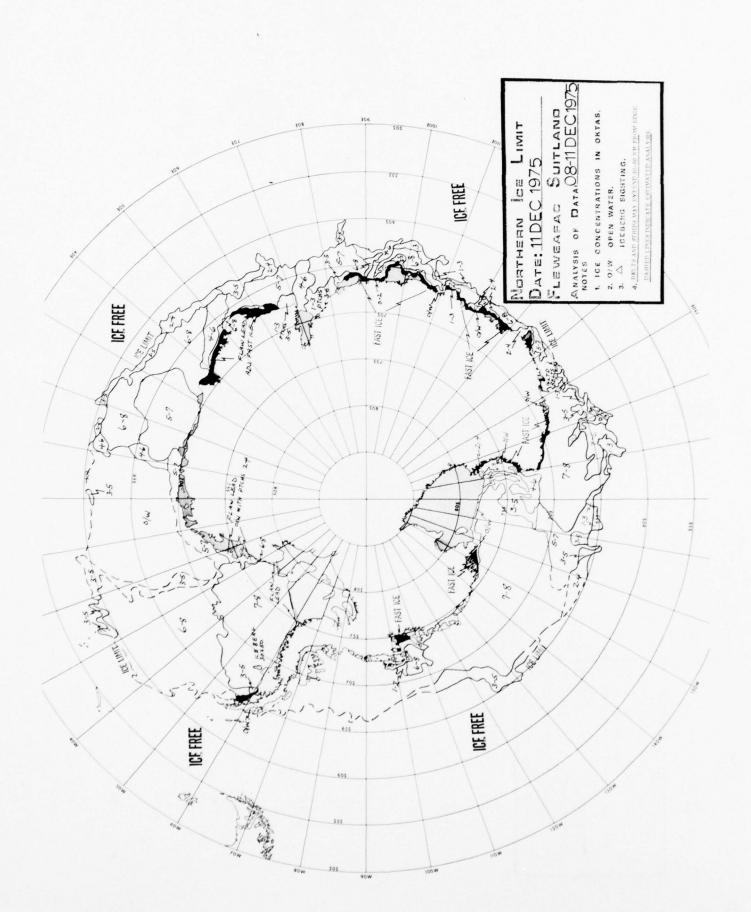


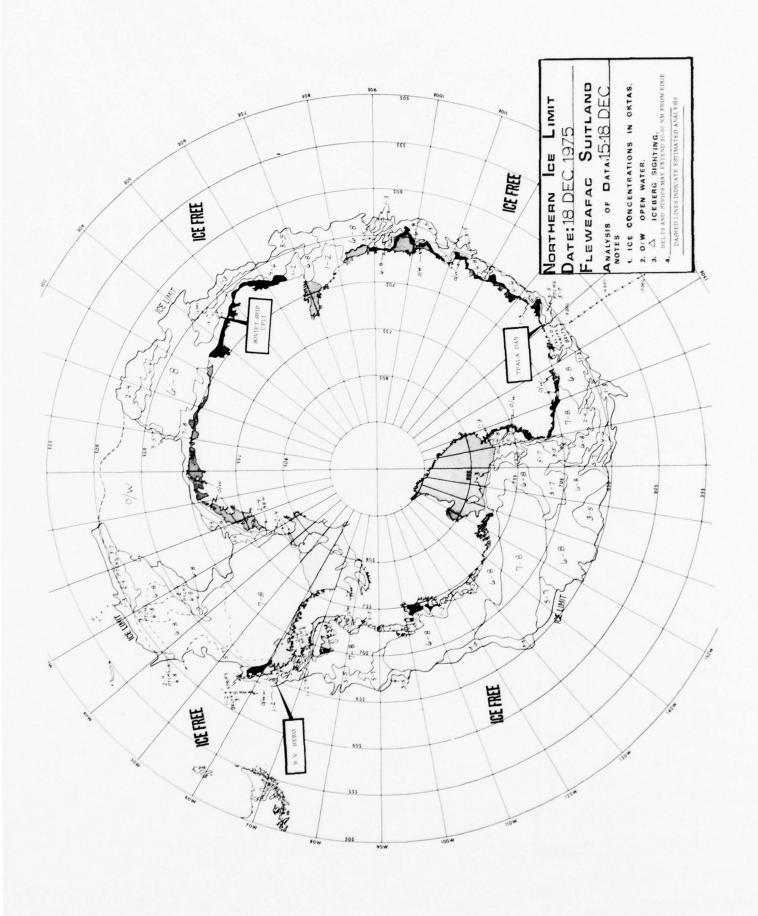


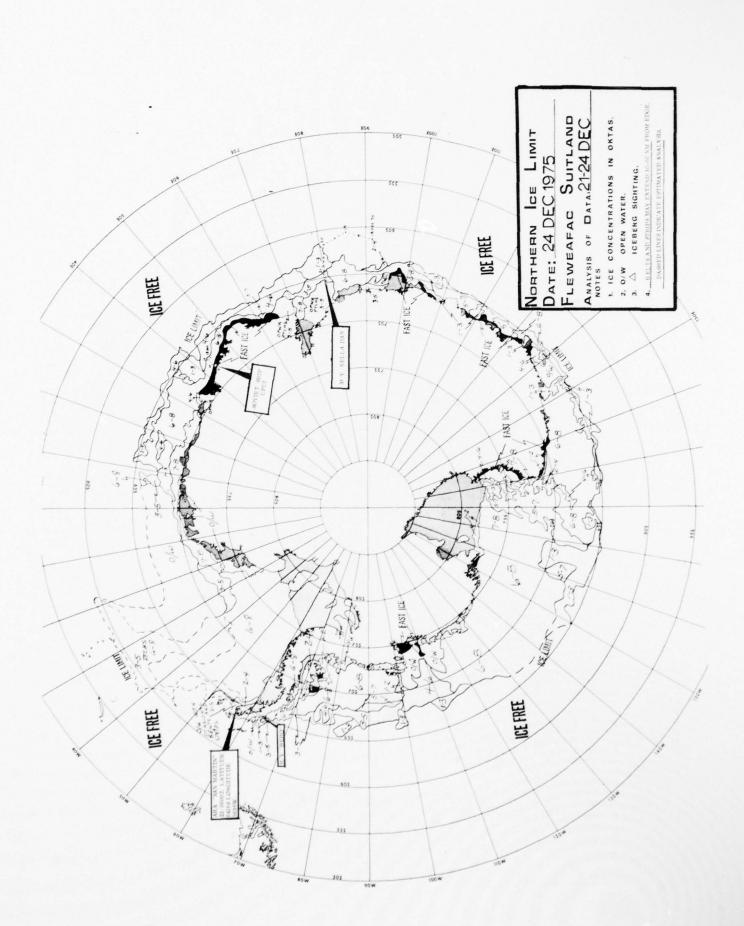


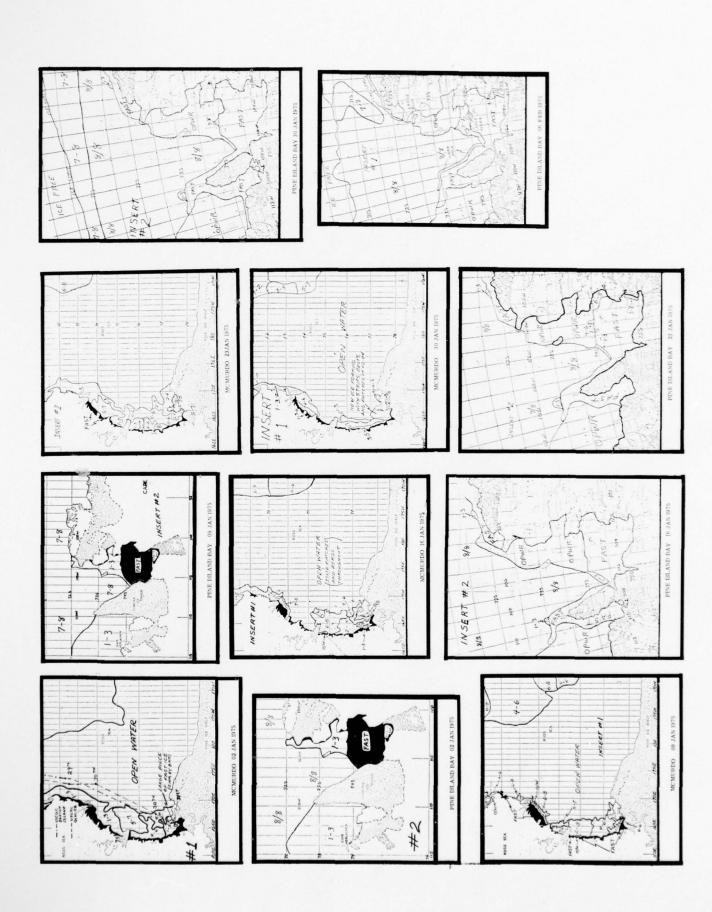


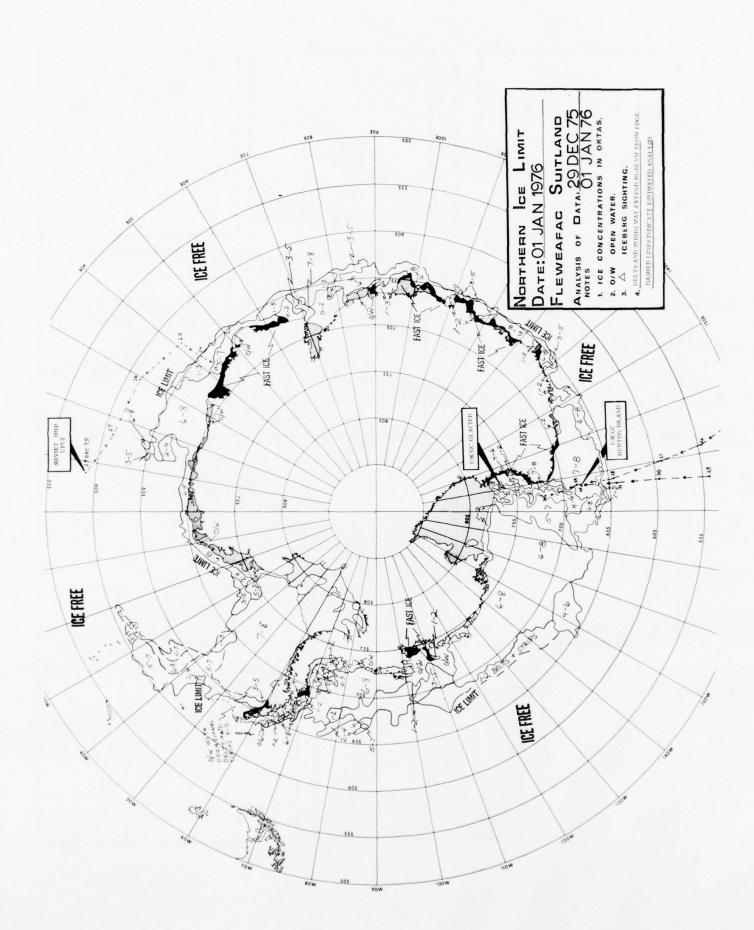


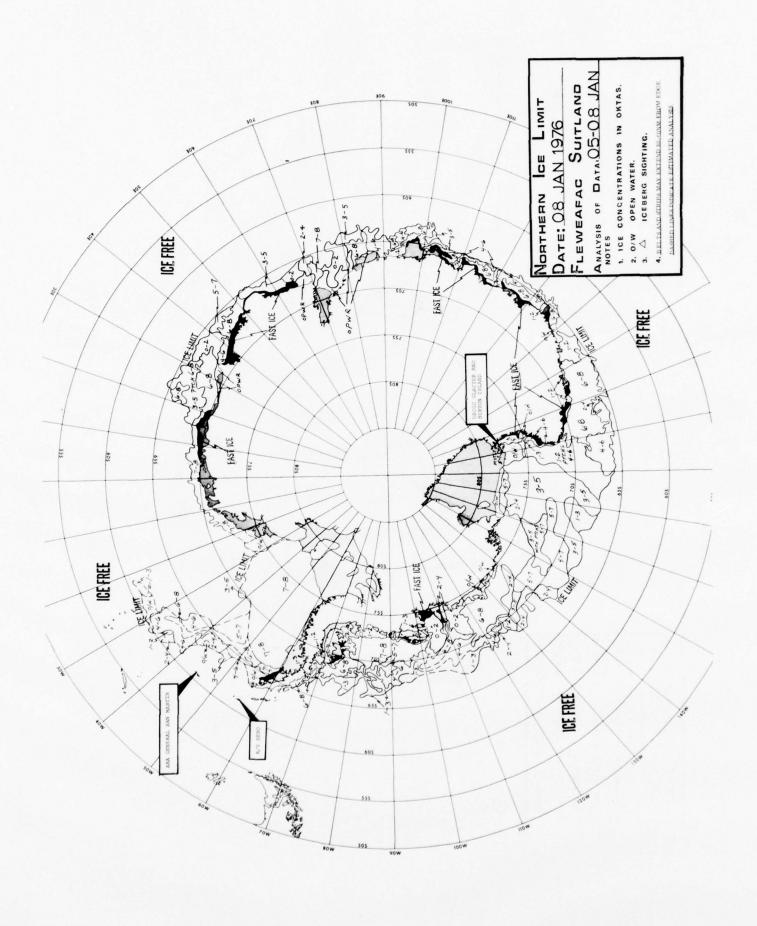


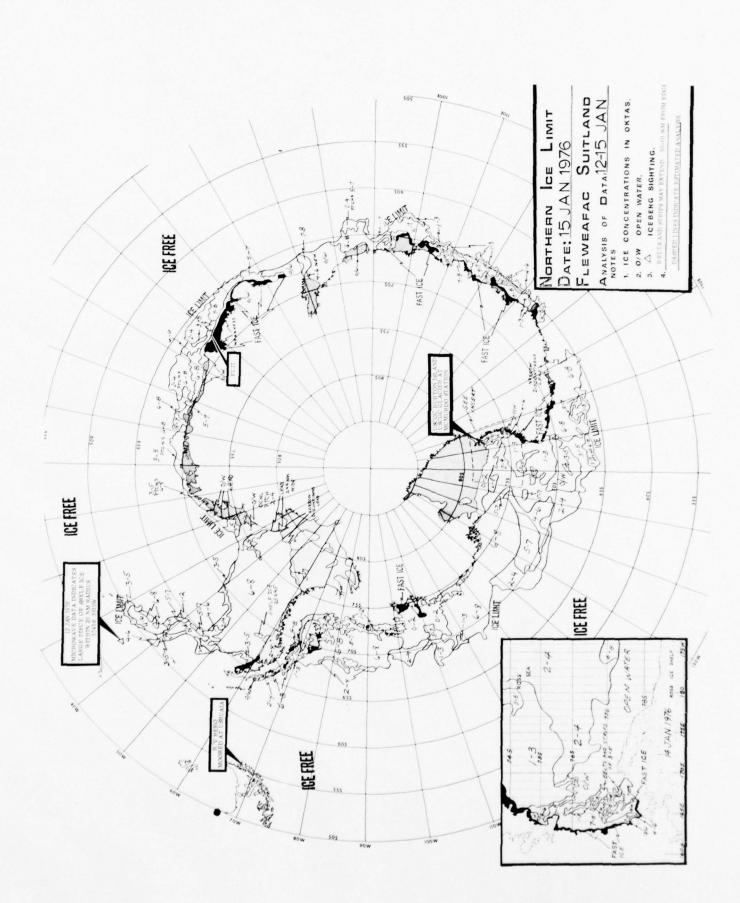


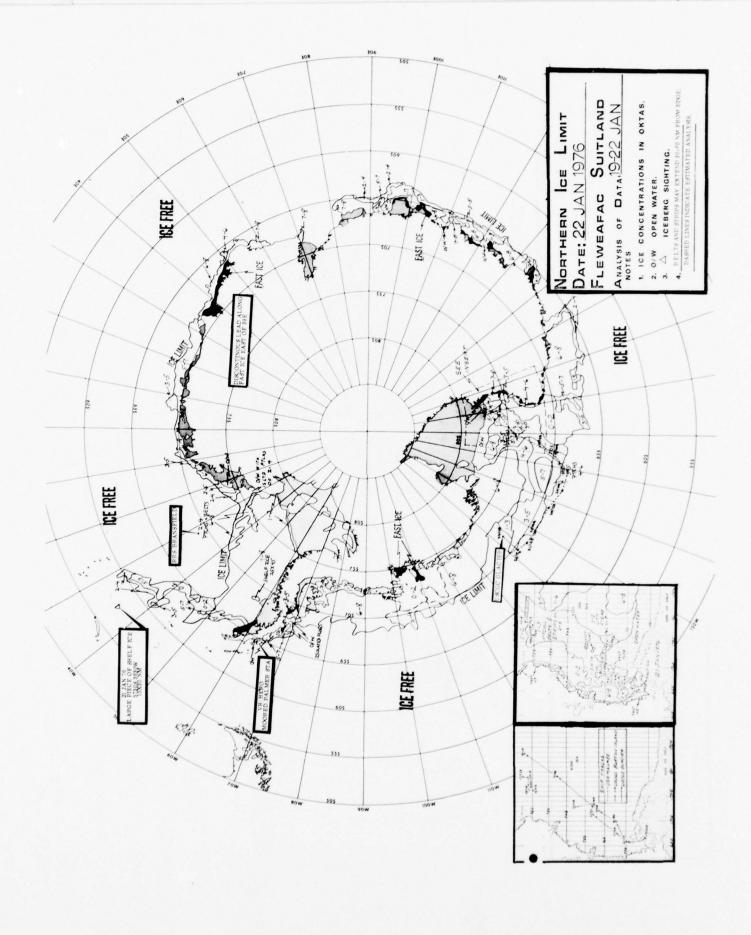


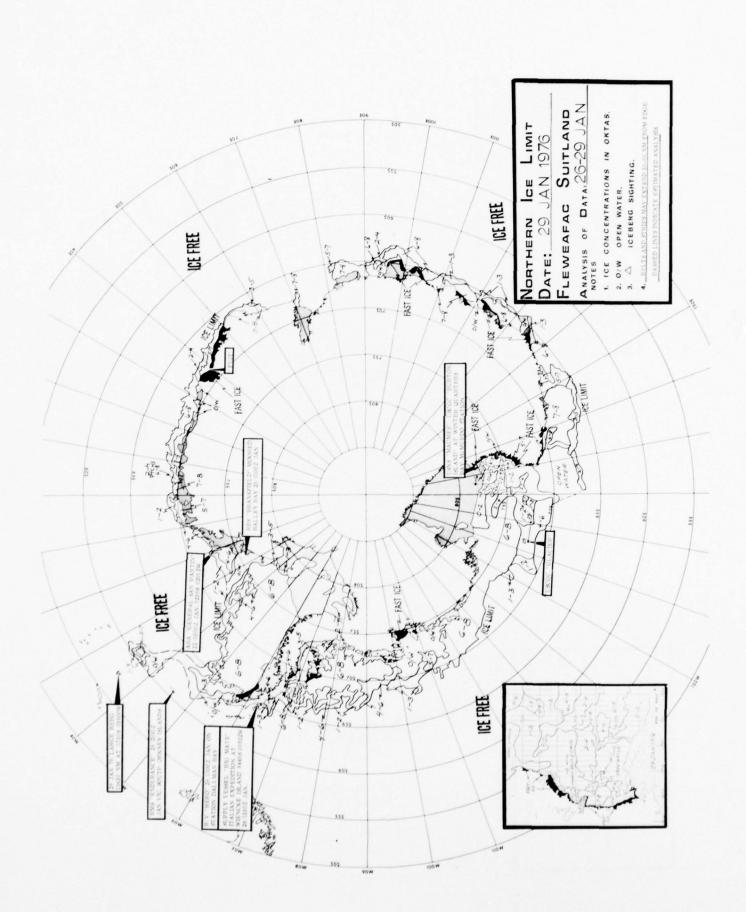


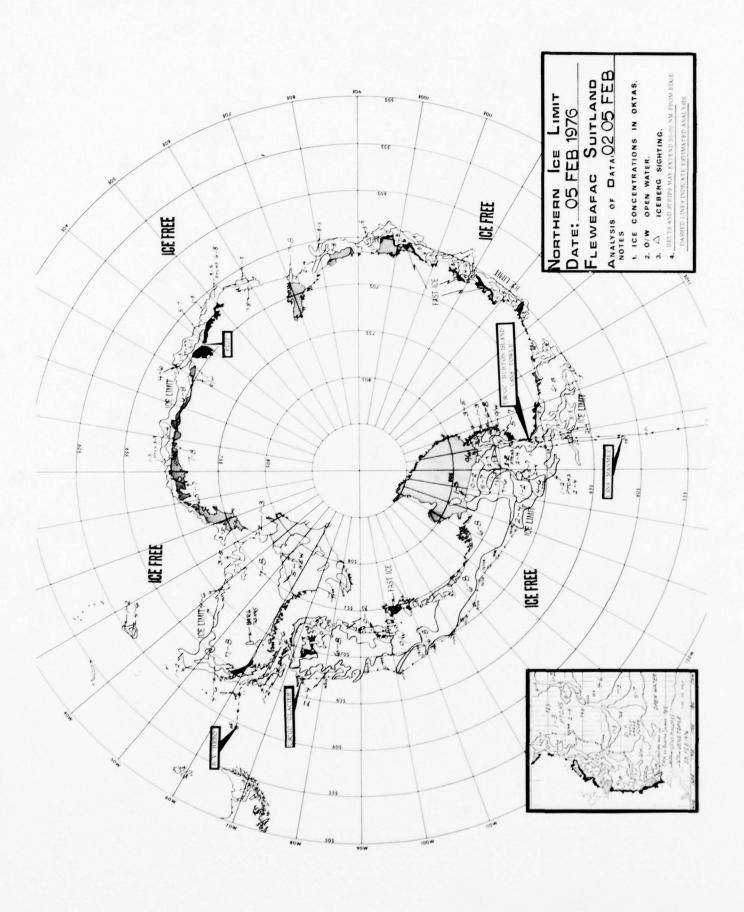


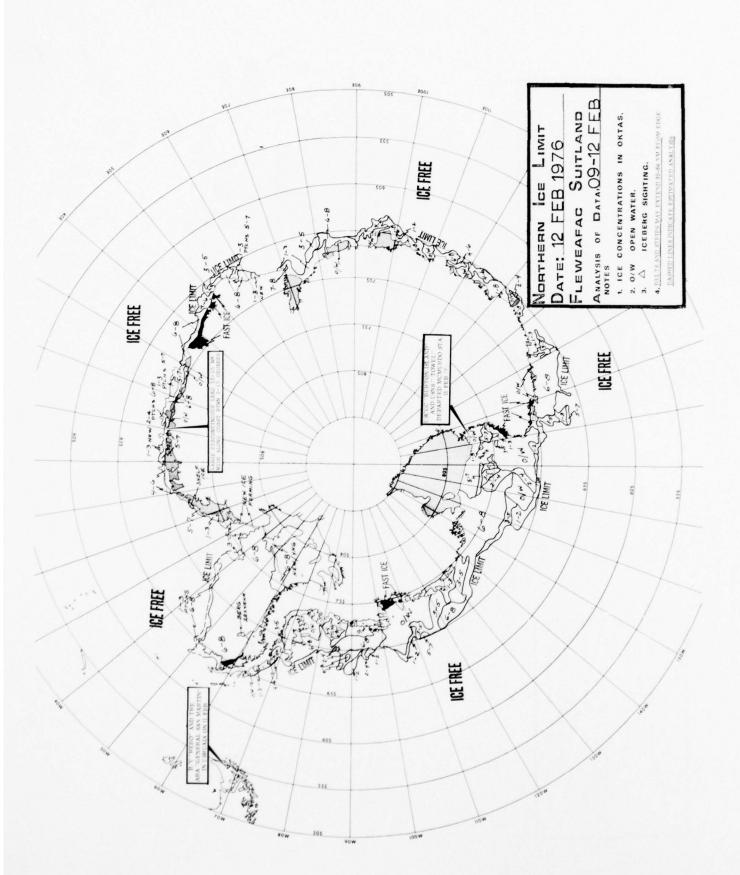


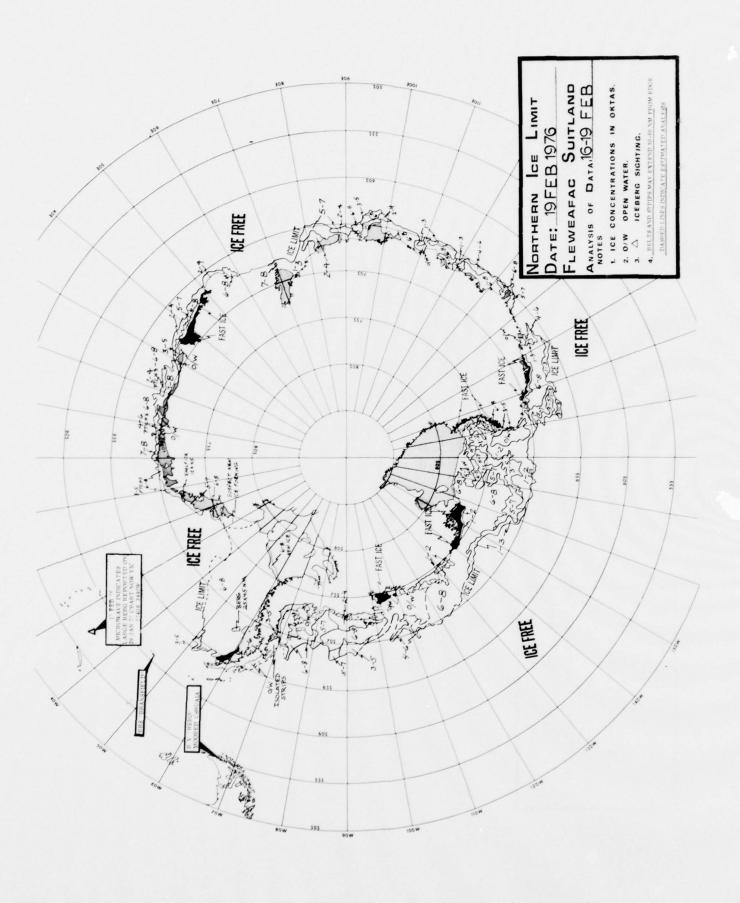


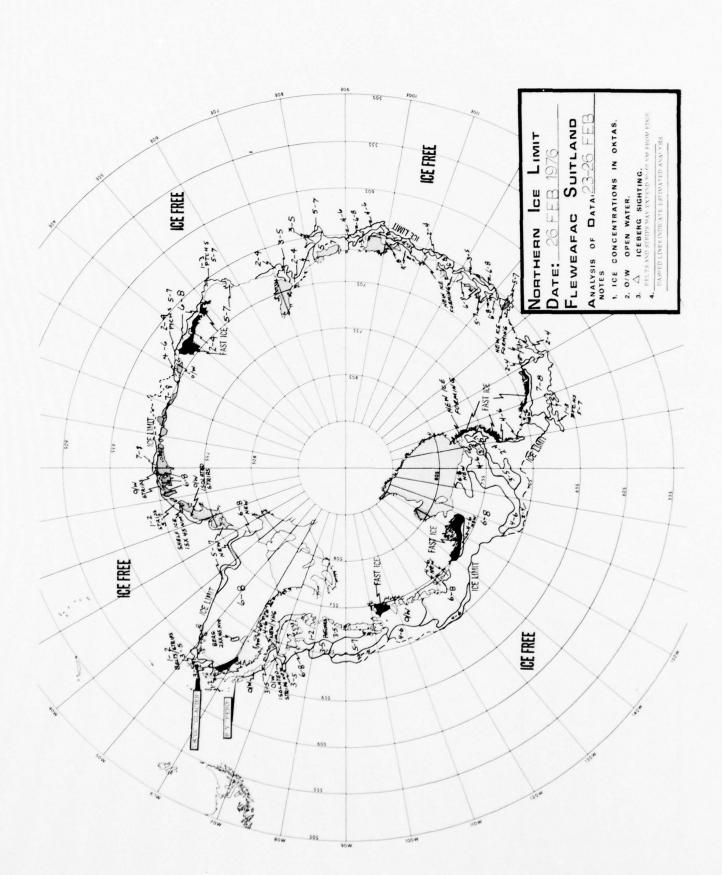


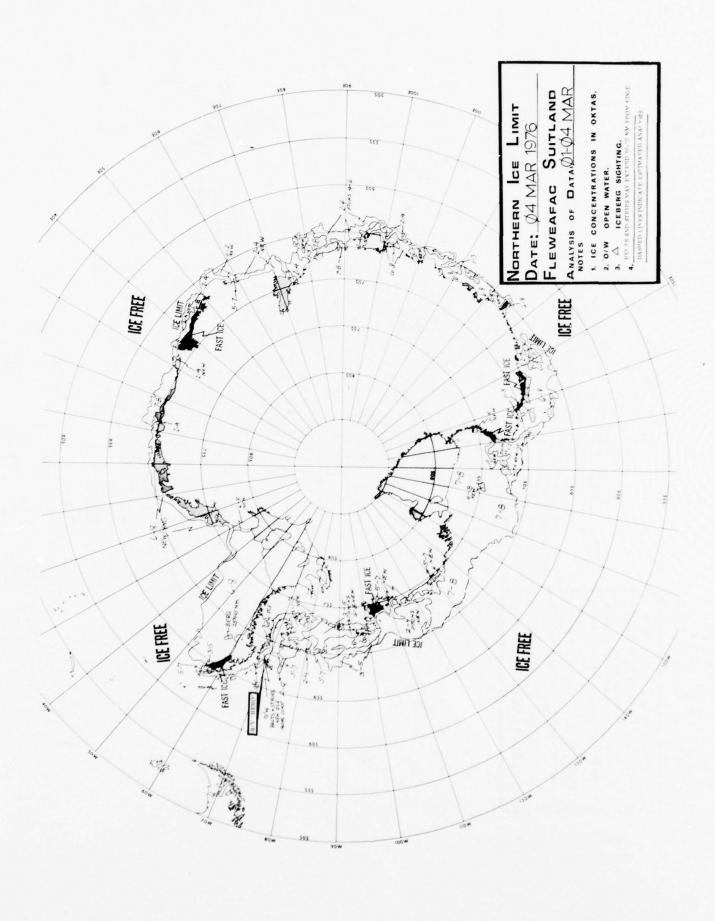


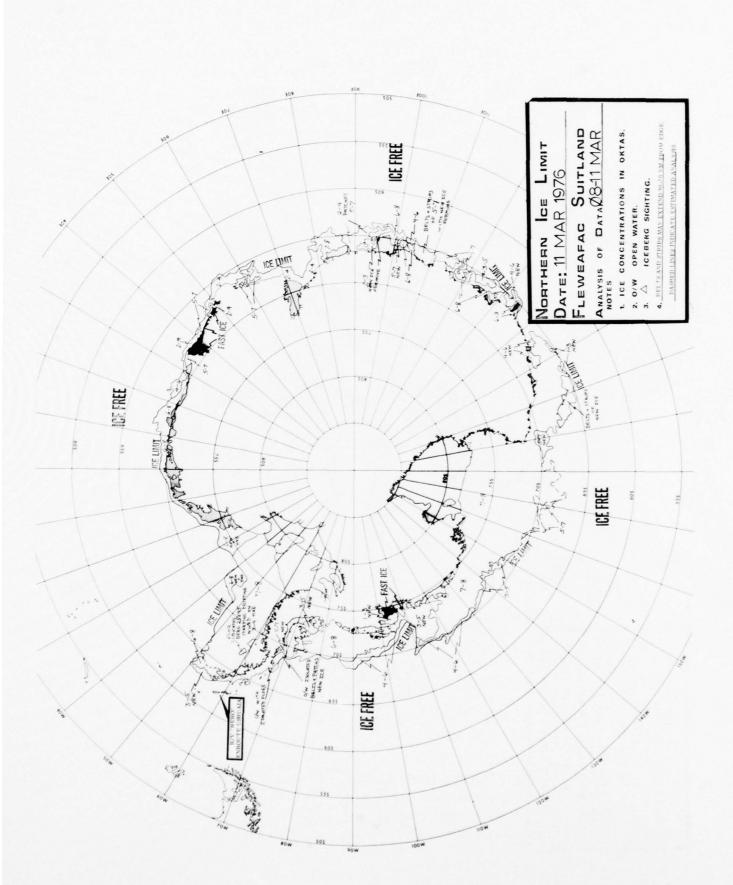


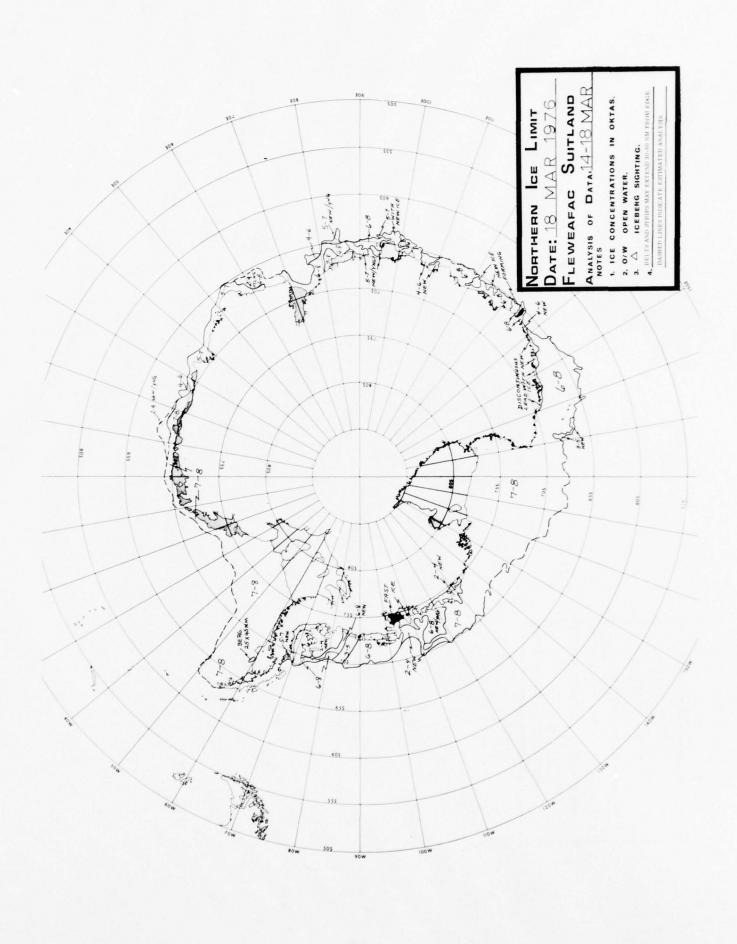


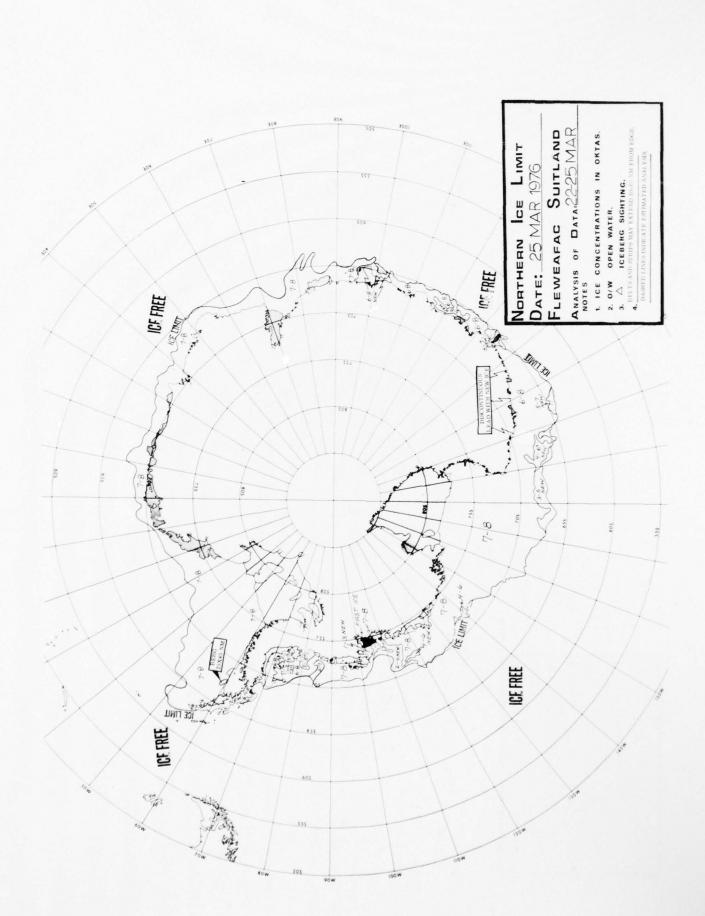


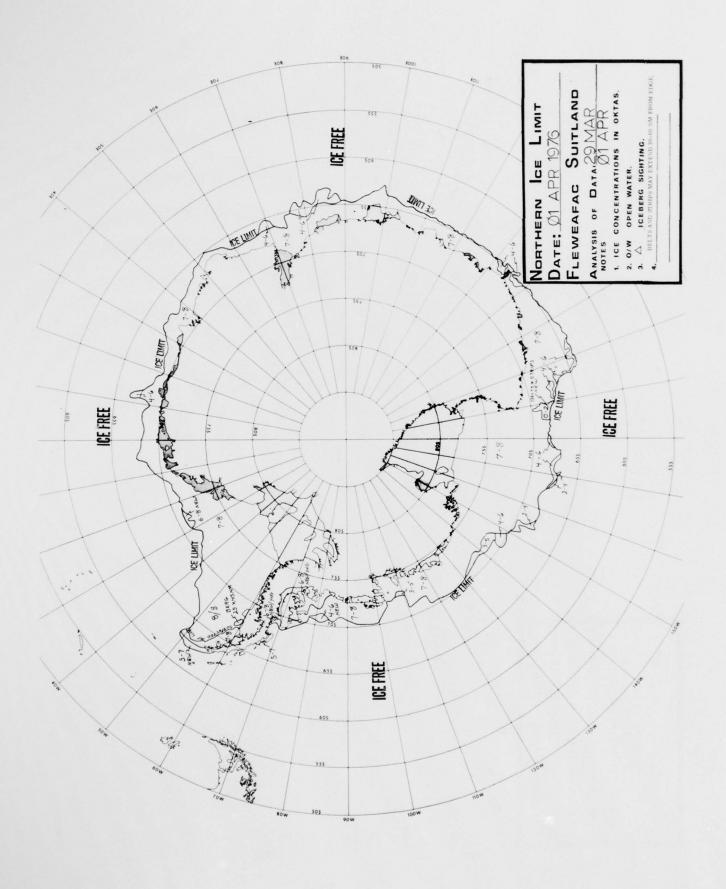


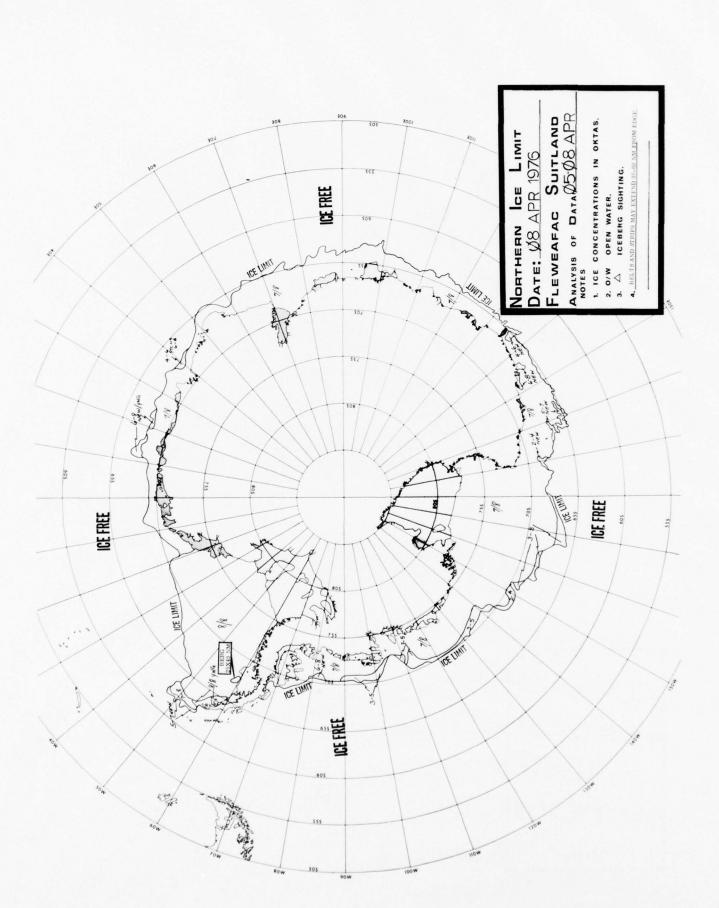


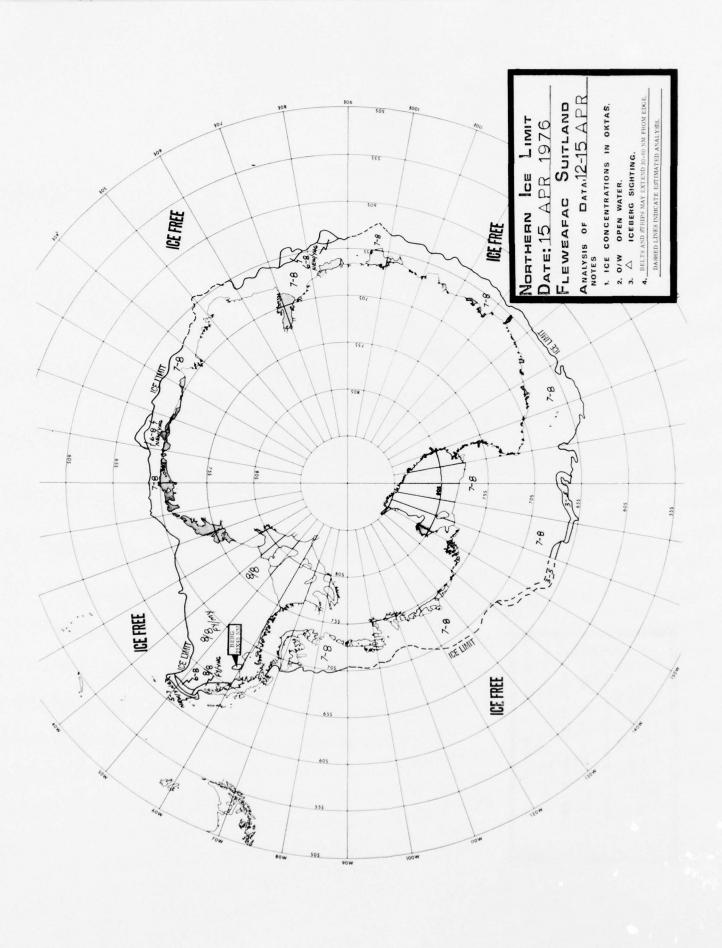


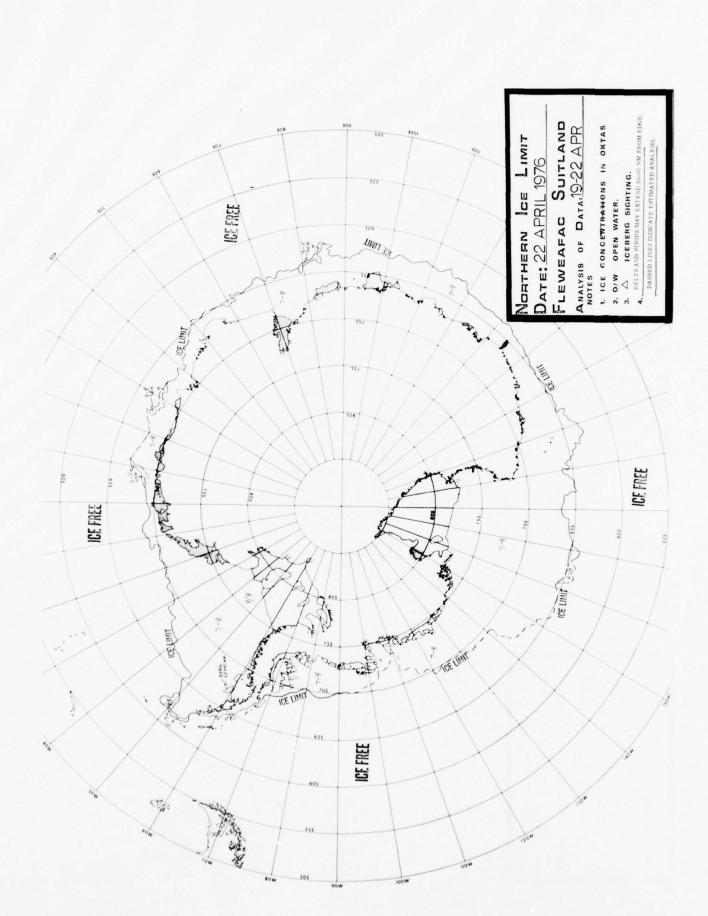




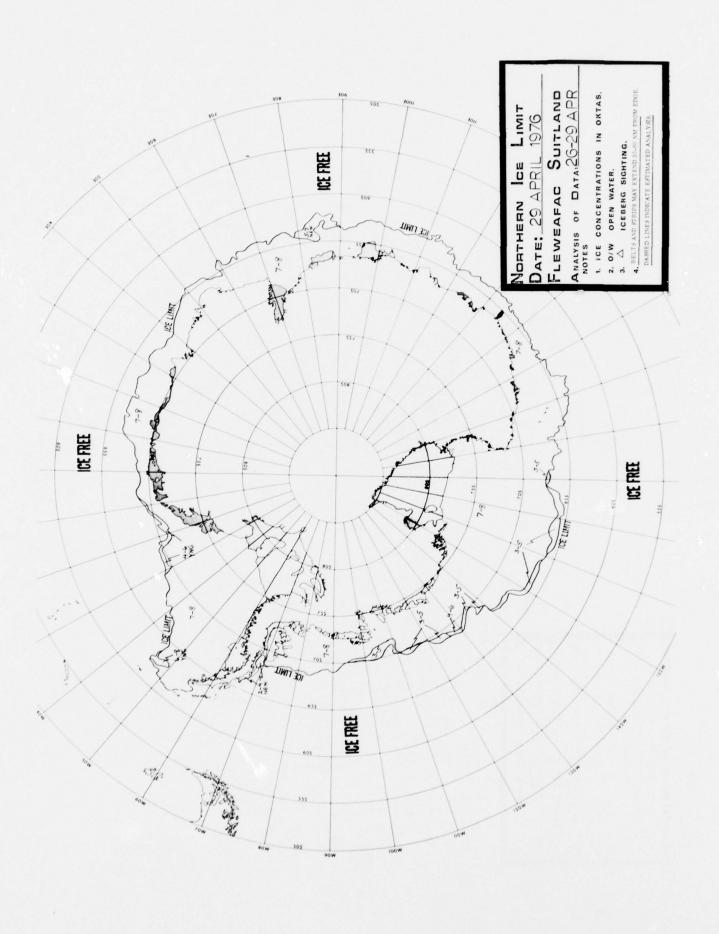


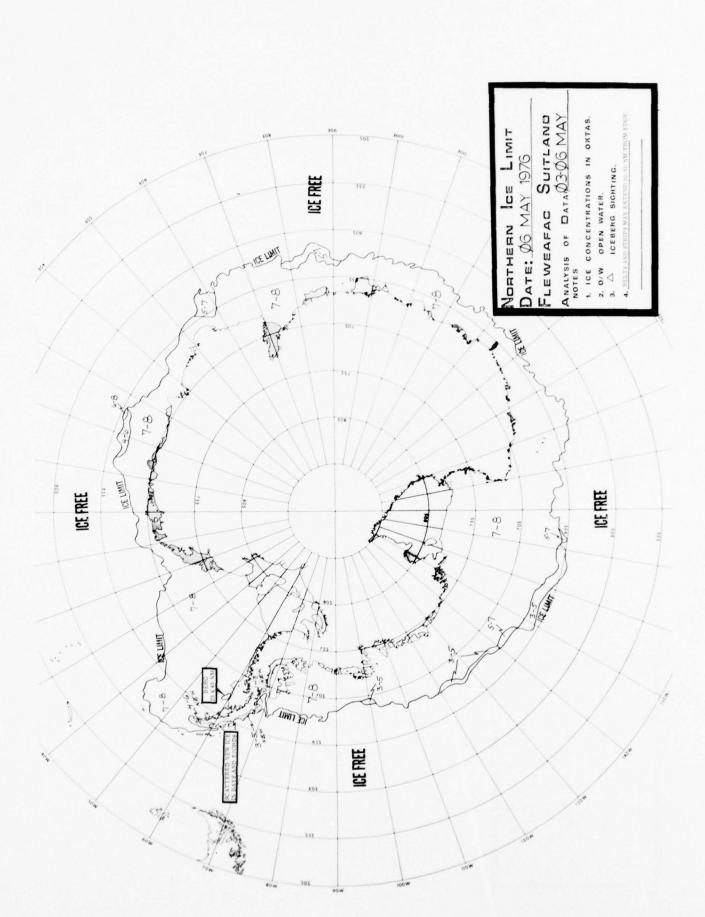


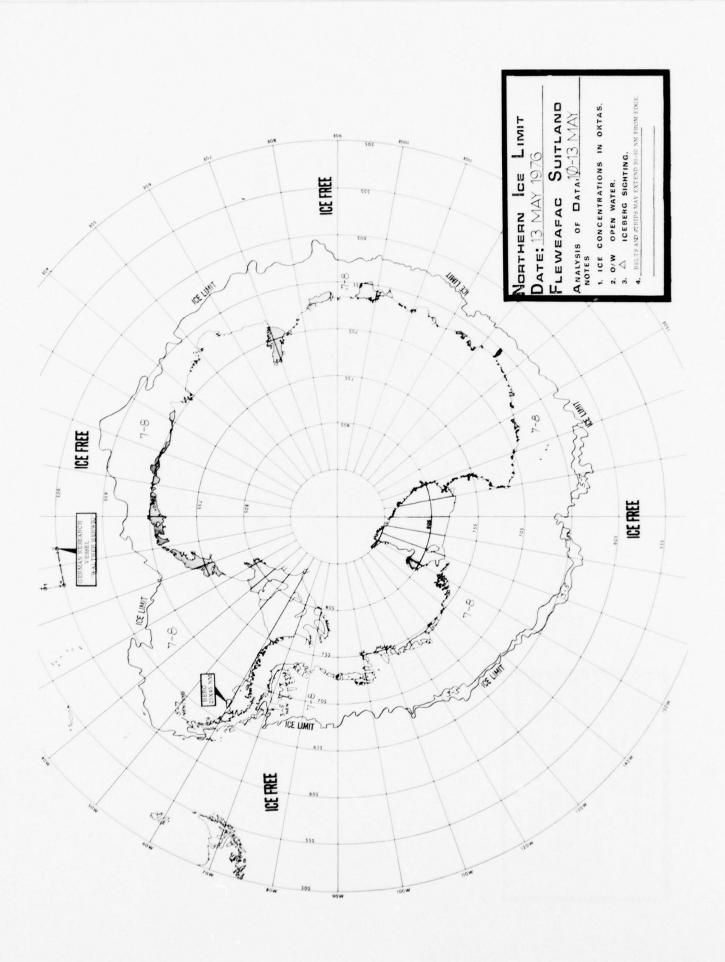


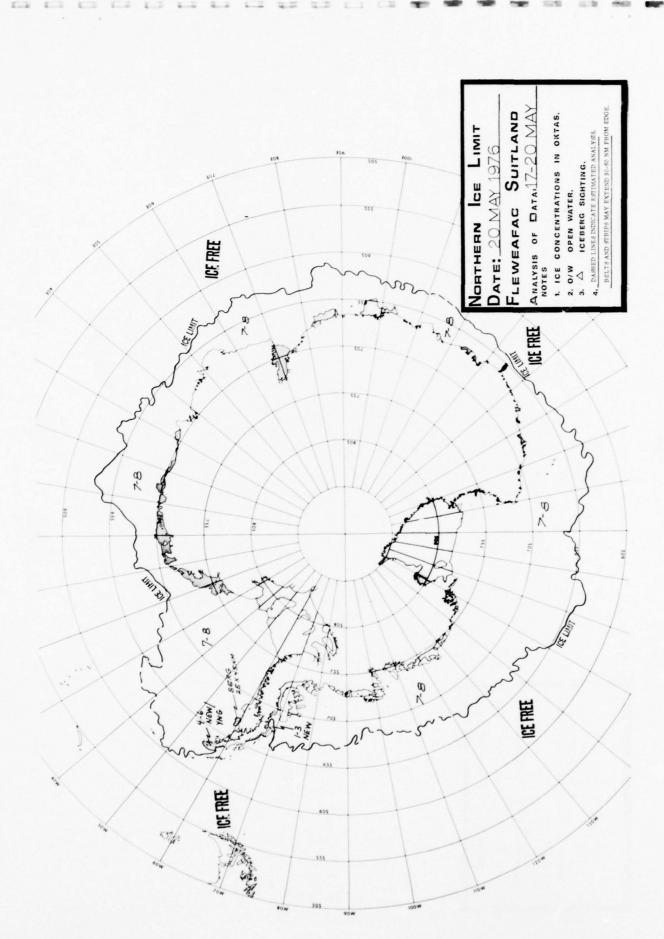


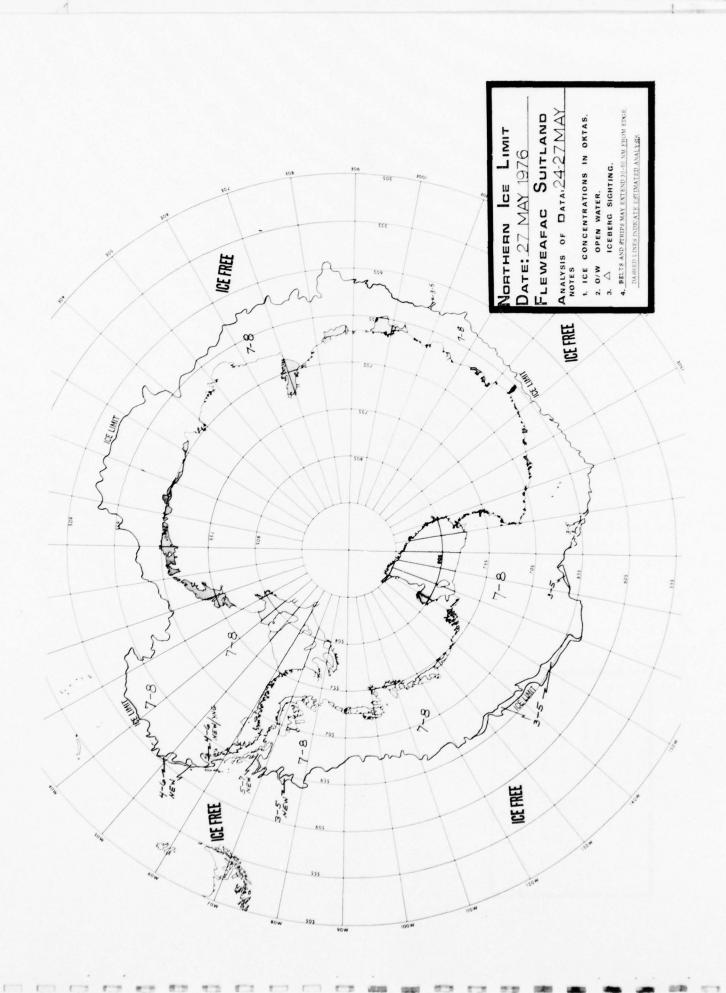
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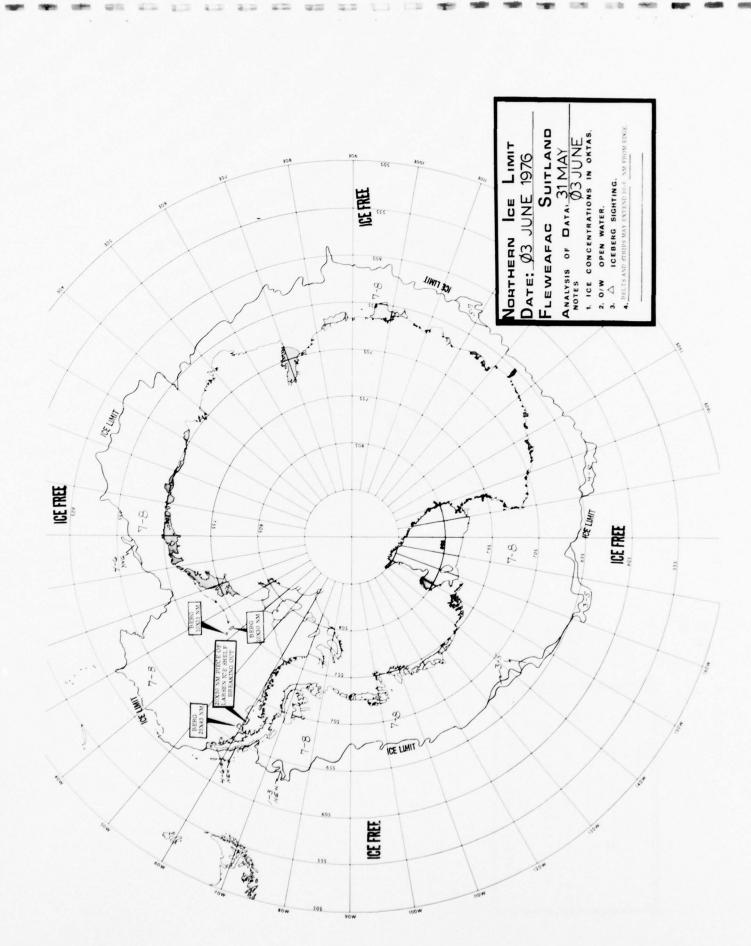


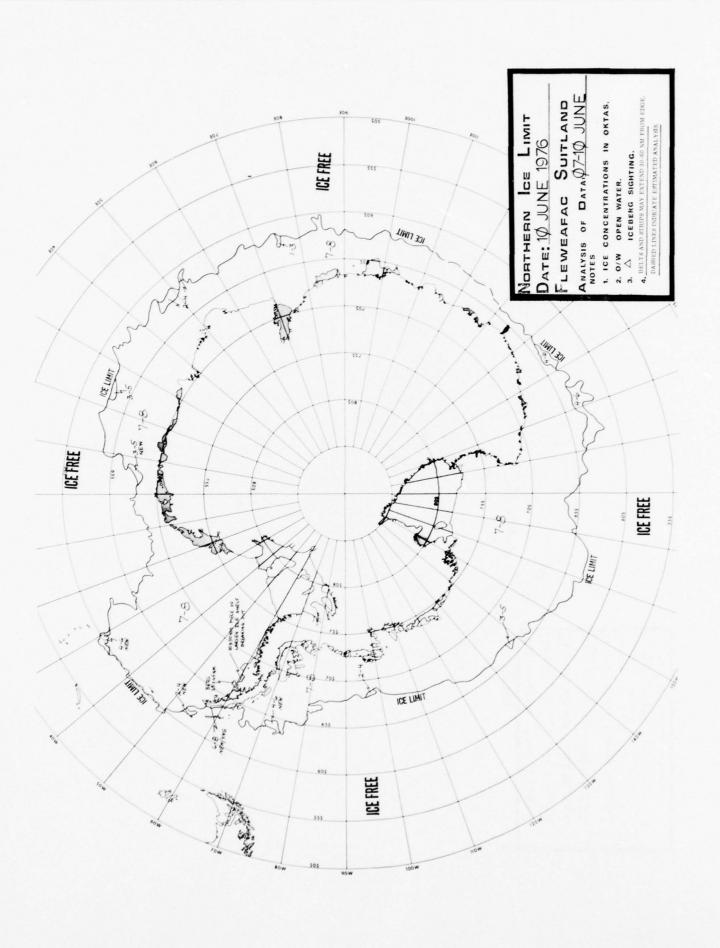


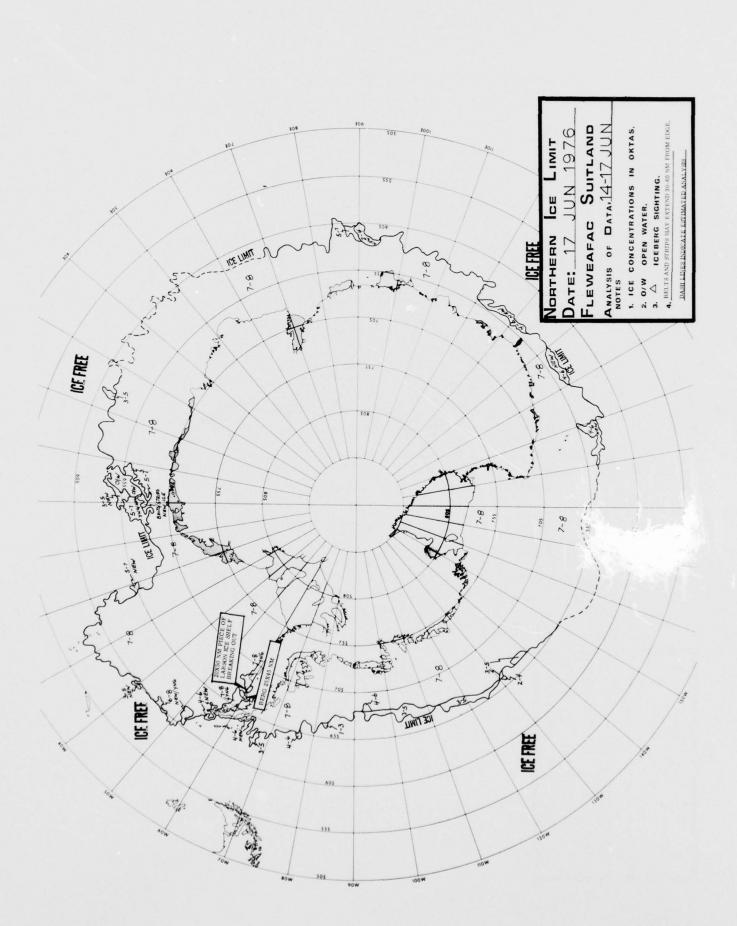


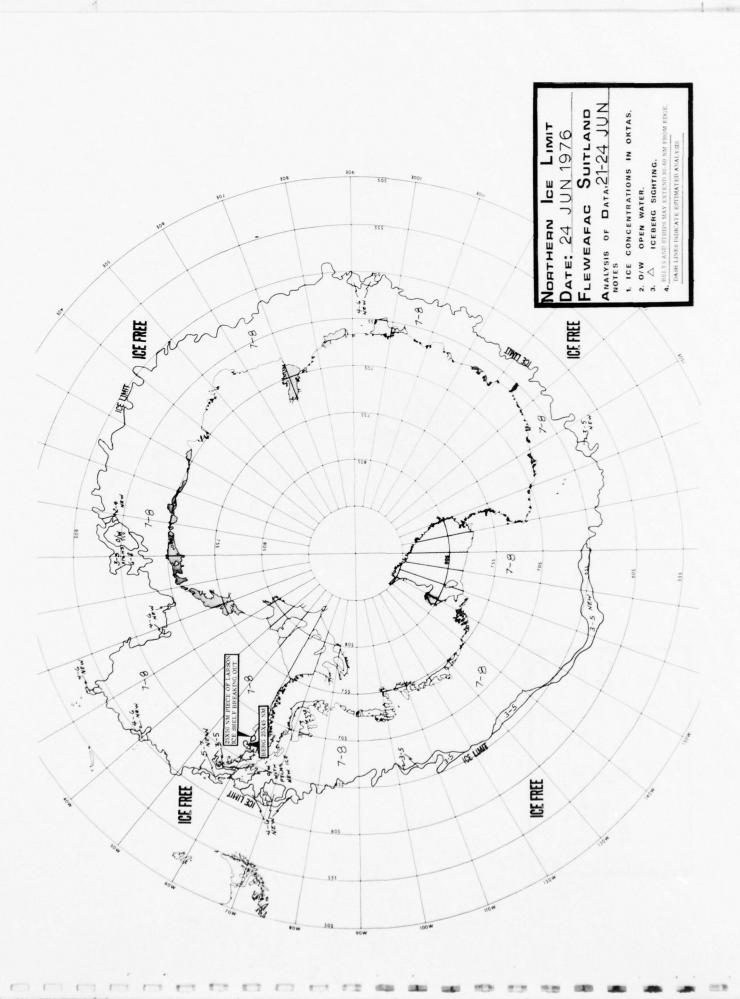


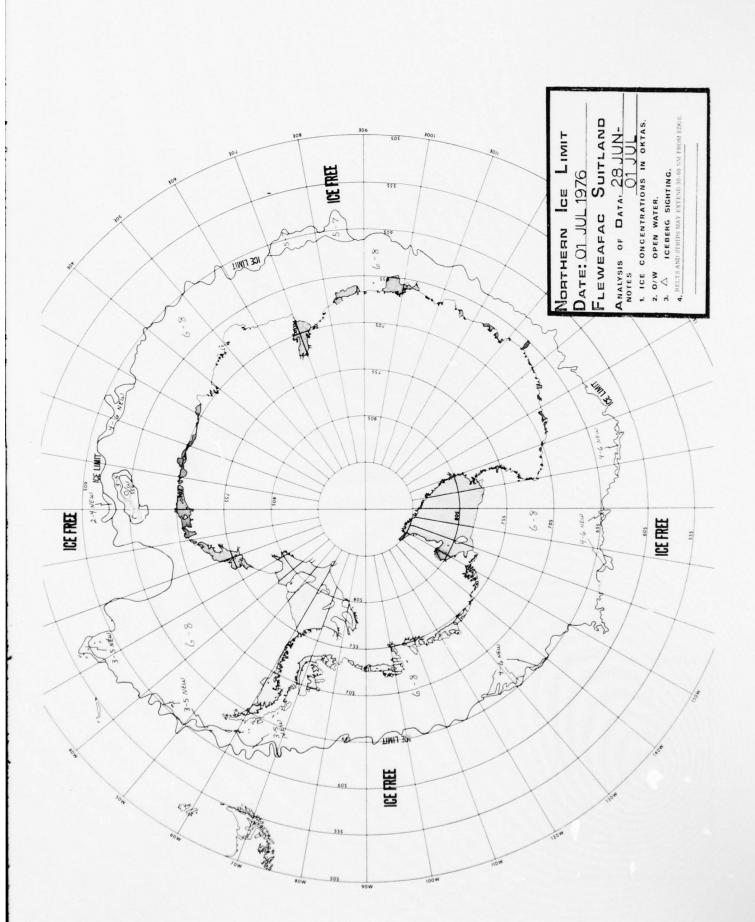


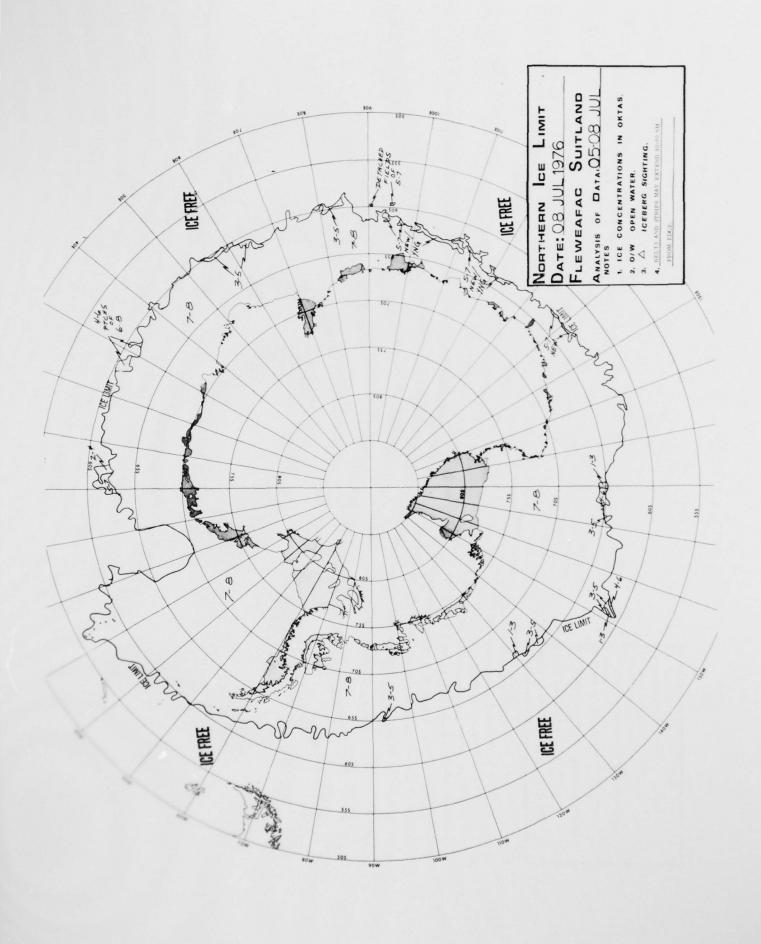




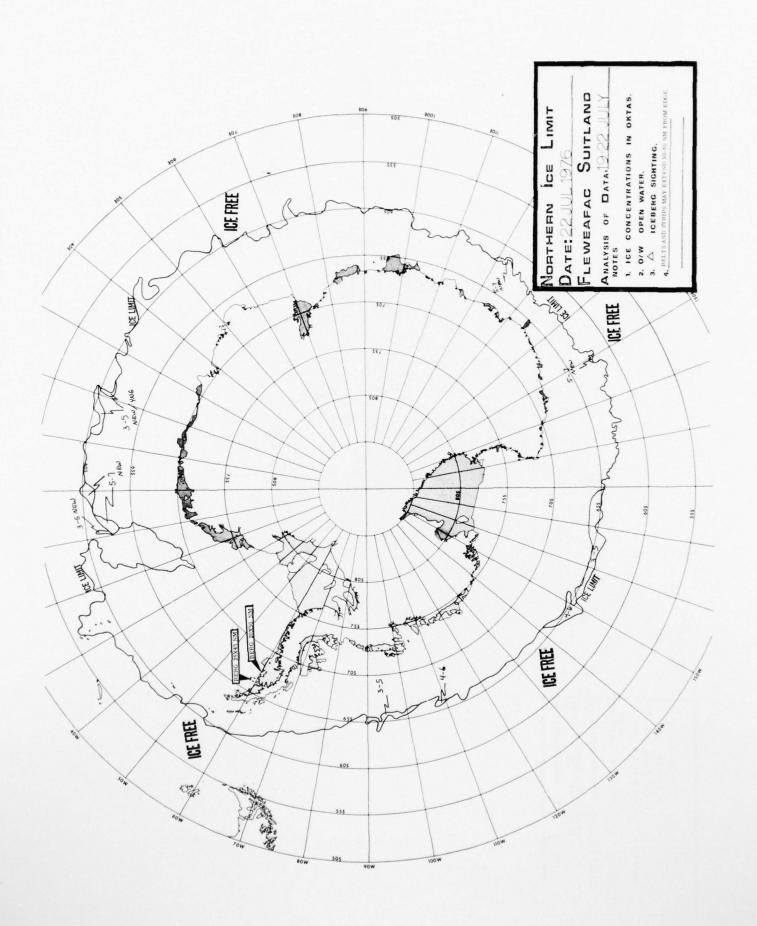






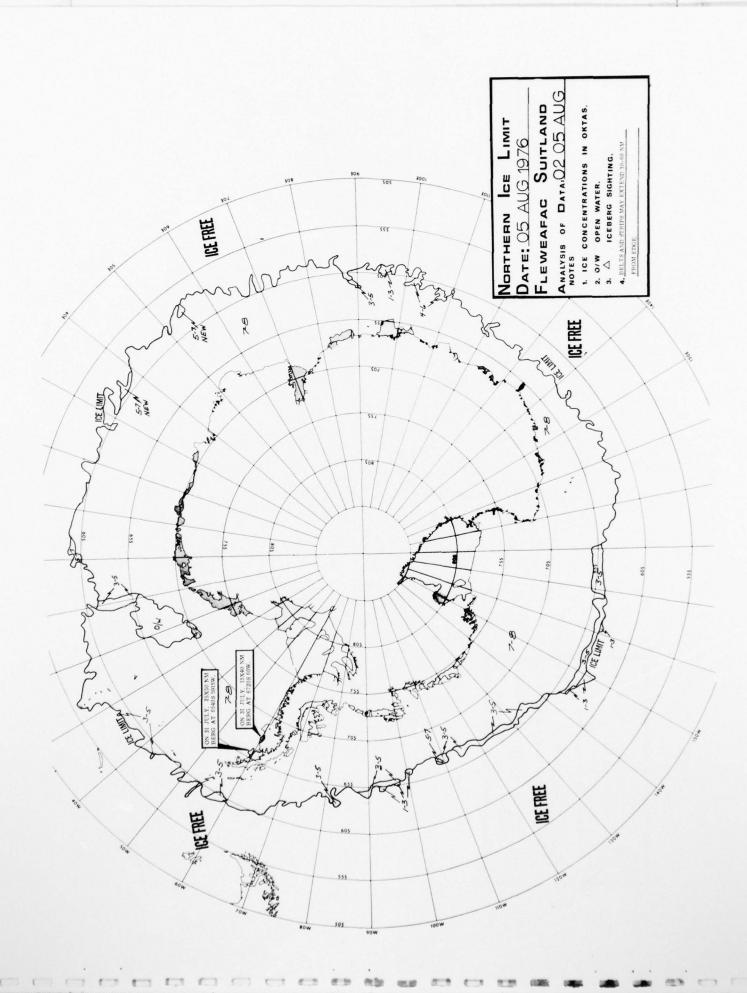


SUITLAND 1. ICE CONCENTRATIONS IN OKTAS. 2. O/W OPEN WATER LIMIT 4. BELTS AND STRIPS MAY EXTEND 30-60 NM OPEN WATER. CE ANALYSIS OF DATA FLEWEAFAC NORTHERN ICE FREE Jan Sec. DATE: 15 FROM EDGE 3. 3.5 DE FREE

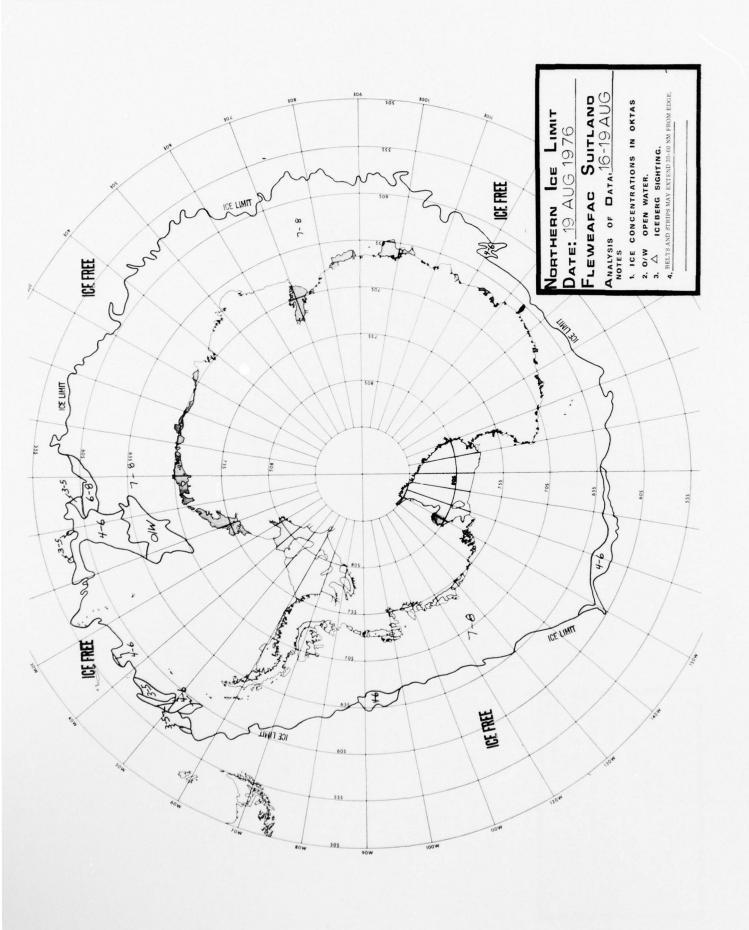


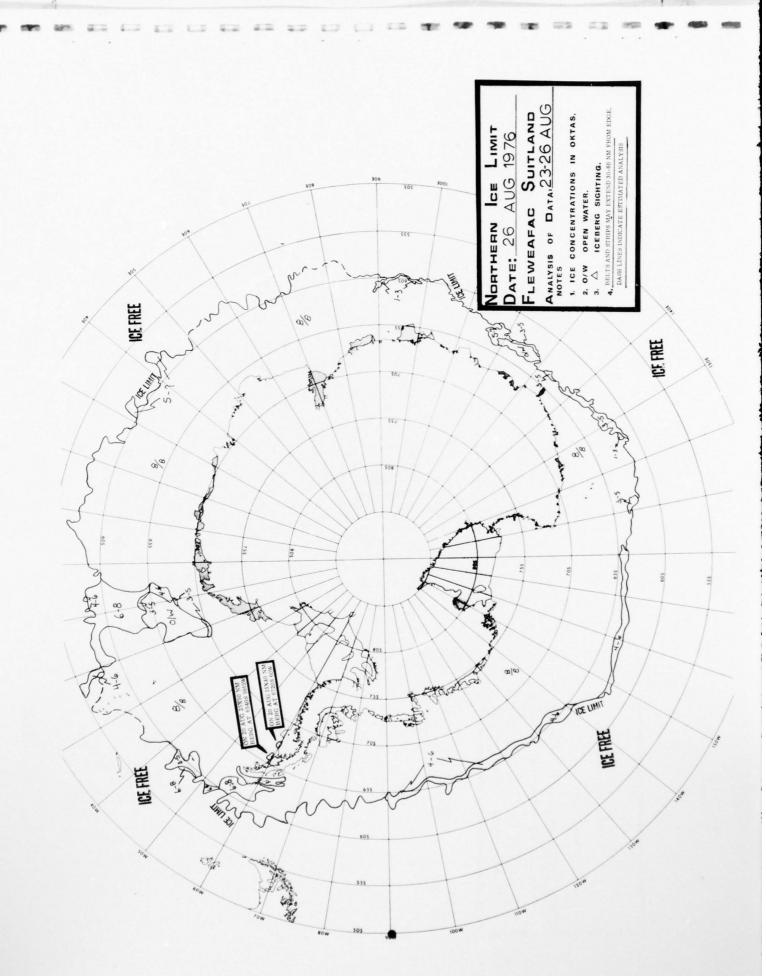
FLEWEAFAC SUITLAND 1. ICE CONCENTRATIONS IN OKTAS.
2. O/W OPEN WATER.
3. \triangleright ICEBERG SIGHTING. Ice LIMIT ANALYSIS OF DATA, 26-29 DATE: 29 JUL 1976 4. BELTS AND STRIPS MAY EXTEND 30-NORTHERN ICE FREE ICE FREE 证服证 ICE FREE

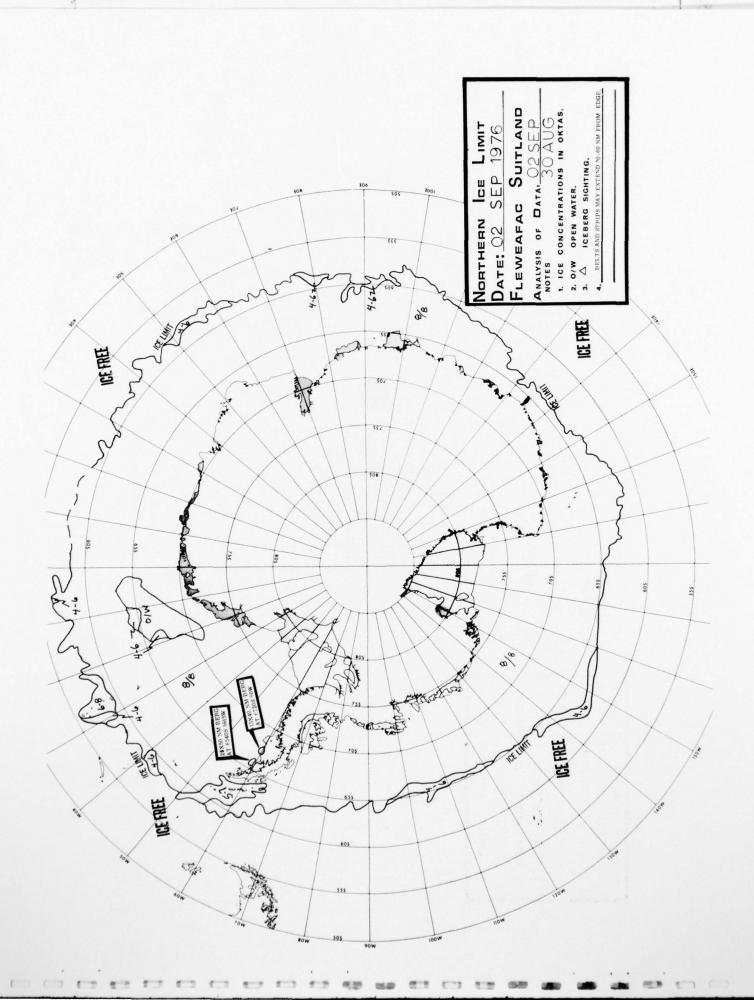
\$20 S.21



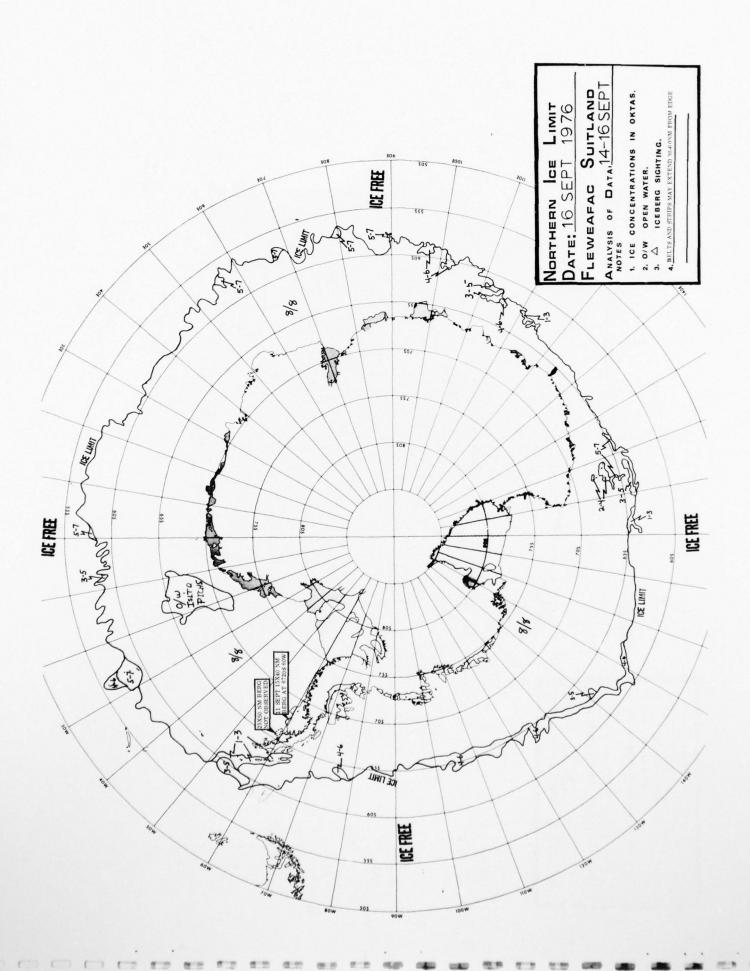
PLEWEAFAC SUITLAND
ANALYSIS OF DATA, 09-12 AUG
NOTES 1. ICE CONCENTRATIONS IN OKTAS. DATE: 12 AUG 1976 CEBERG SIGHTING. ICE FREE 2. O/W OPEN WATER. JOE FREE SE EST ICE FREE 7-8 ICE FREE





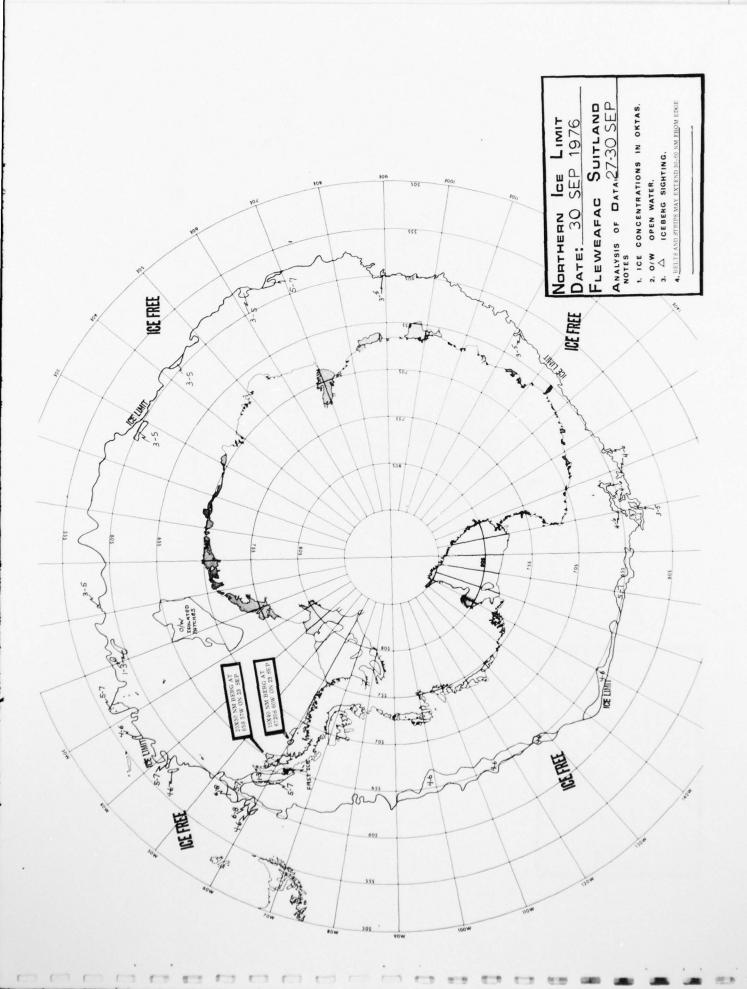


ANALYSIS OF DATA 06-09 SEPT NOTES 4. BELTS AND STRIPS MAY EXTEND 30-60 NM FROM EDGE. FLEWEAFAC SUITLAND 1. ICE CONCENTRATIONS IN OKTAS. 09 SEPT 1976 LIMIT DASH LINES INDICATE ESTIMATED ANALYSIS 2. 0/W OPEN WATER.
3. \trianglerian ICEBERG SIGHTING. CE NORTHERN DATE: ICE FREE 院別群 30



FLEWEAFAC SUITLAND
ANALYSIS OF DATA, 2023 SEPT
NOTES 1. ICE CONCENTRATIONS IN OKTAS. NORTHERN ICE LIMIT DATE: 23 SEPT 1976 ICEBERG SIGHTING. 2. O/W OPEN WATER. DE FIEE ICE FREE

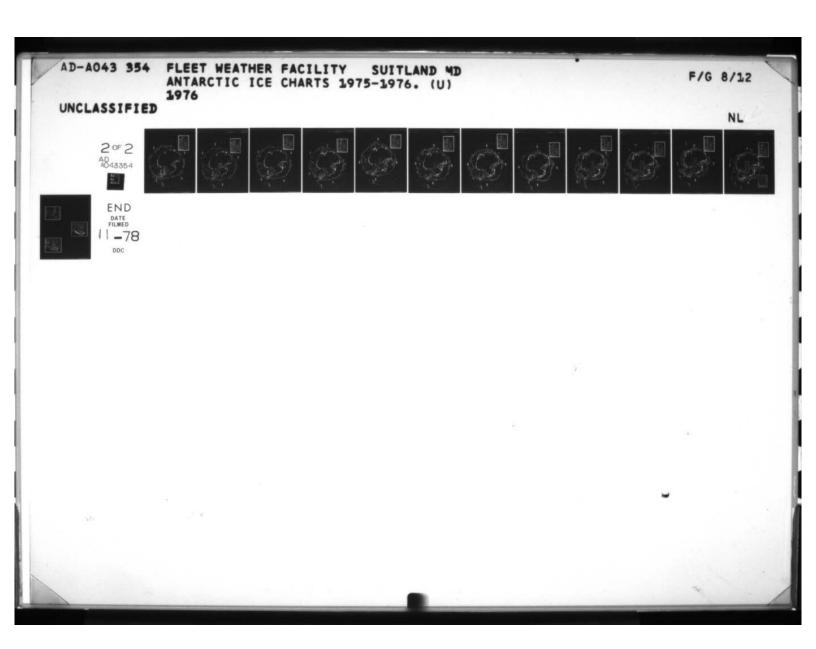
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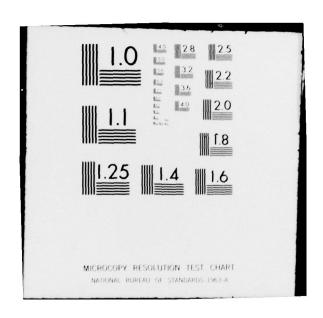


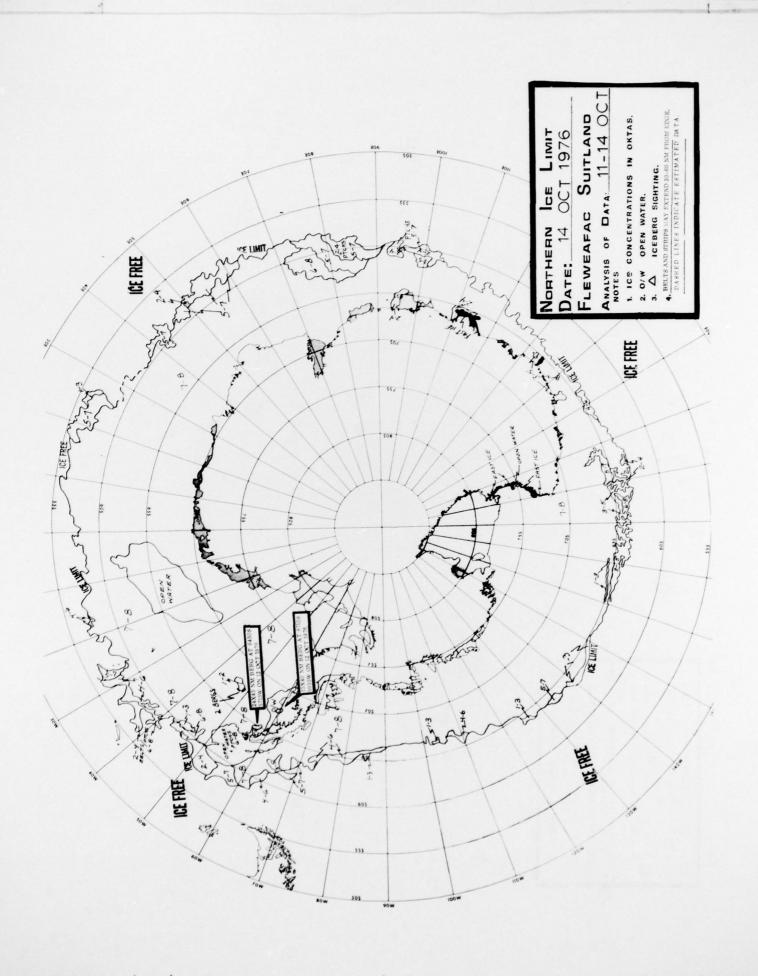
FLEWEAFAC SUITLAND
ANALYSIS OF DATAL 04- 07 OCT
NOTES 2. O/W OPEN WATER.

3. \triangle iCEBERG SIGHTING,

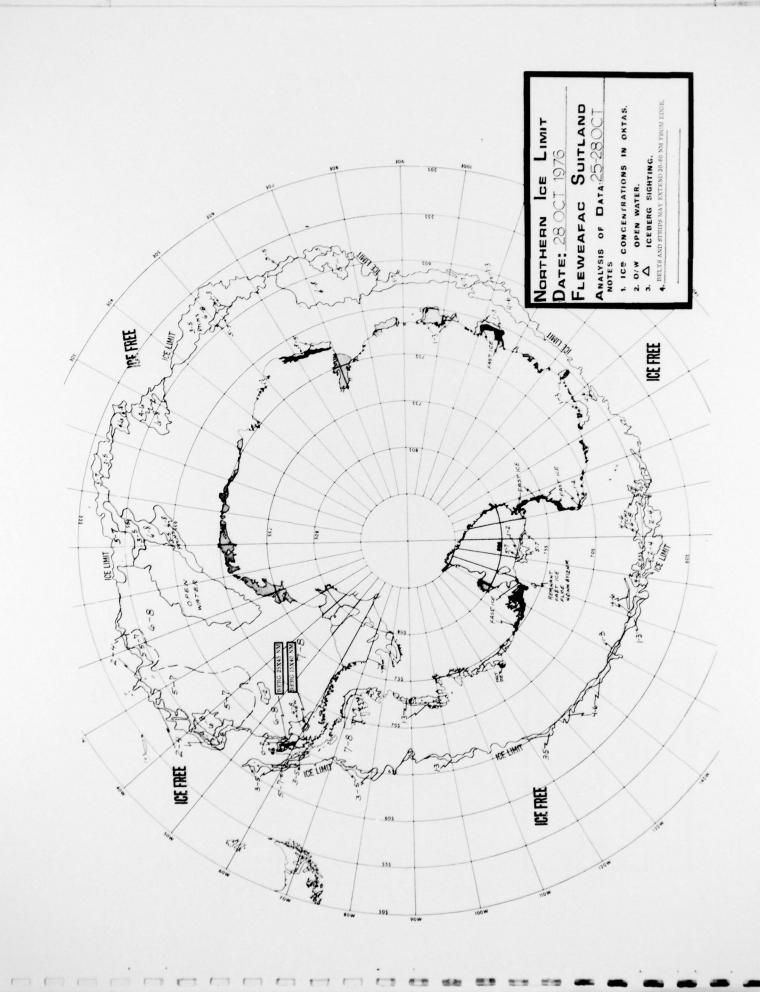
4. BELTS AND STRIPS MAY EXTEND 30-60 NM FROM EDGE 1. ICE CONCENTRATIONS IN OKTAS. NORTHERN ICE LIMIT DATE: 07 OCT 1976 DATE: ICE FREE FAST ICE-ICEPREE SE FIET

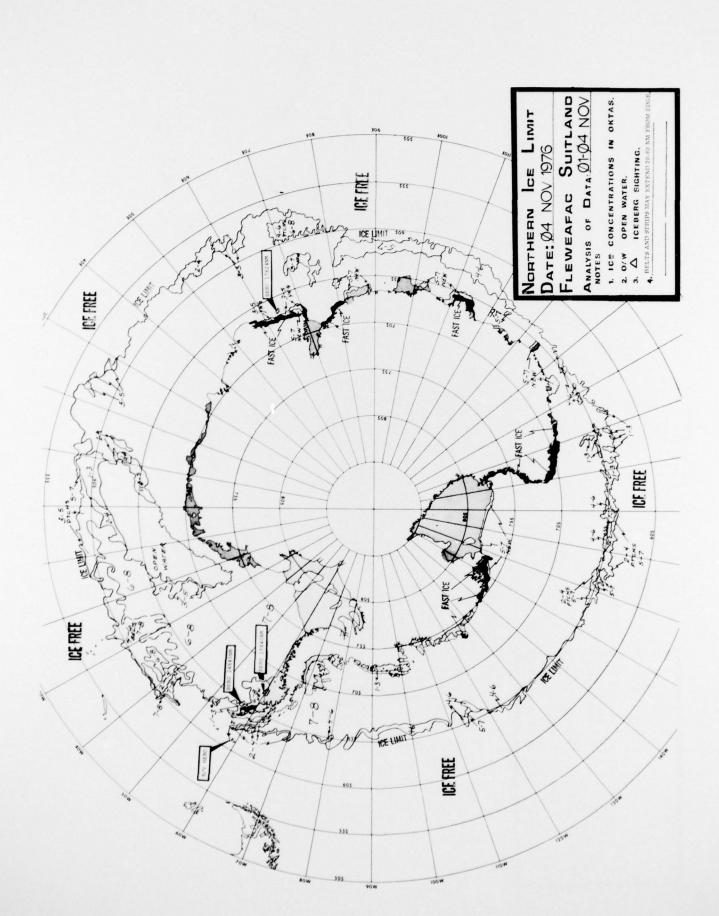




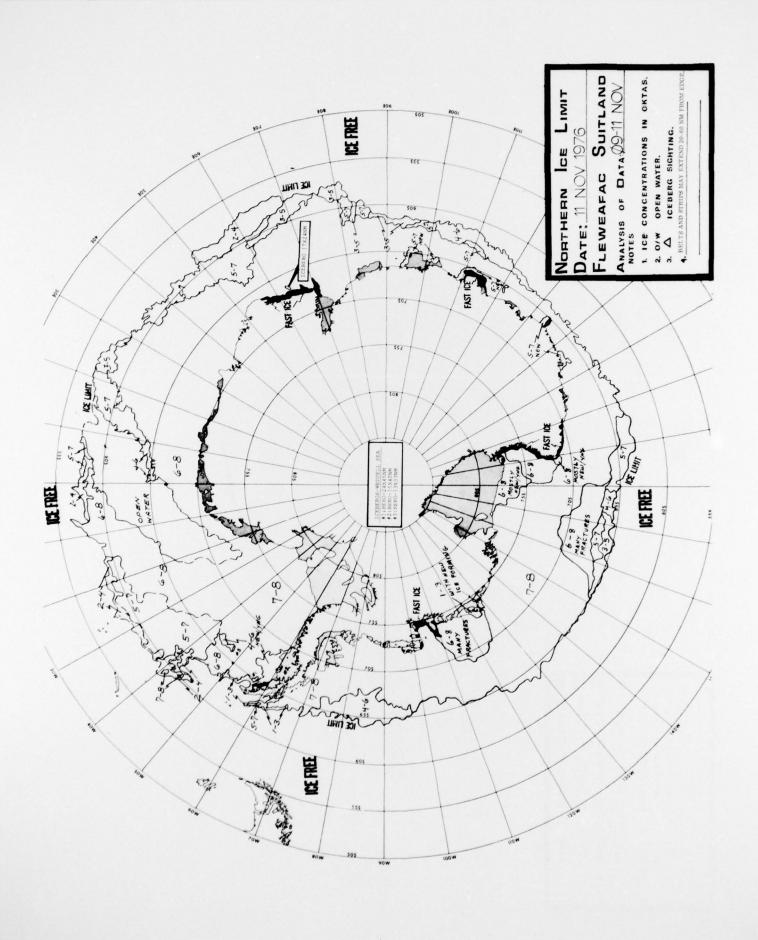


BELTS AND STRIPS MAY EXTEND 30-50 NW FROM EDGE FLEWEAFAC SUITLAND ANALYSIS OF DATA, 18-21 OCT I. ICE CONCENTRATIONS IN OKTAS. NOGTHERN ICE LIMIT DATE: 21 OCT 1976 DASHED LINES INDICATE ESTIMATED ANALYSIS OF FREE ICEBERG SIGHTING. 2. O/W OPEN WATER. ICE LIMIT ICE FREE FAST ICE = ICE FREE OF PREF

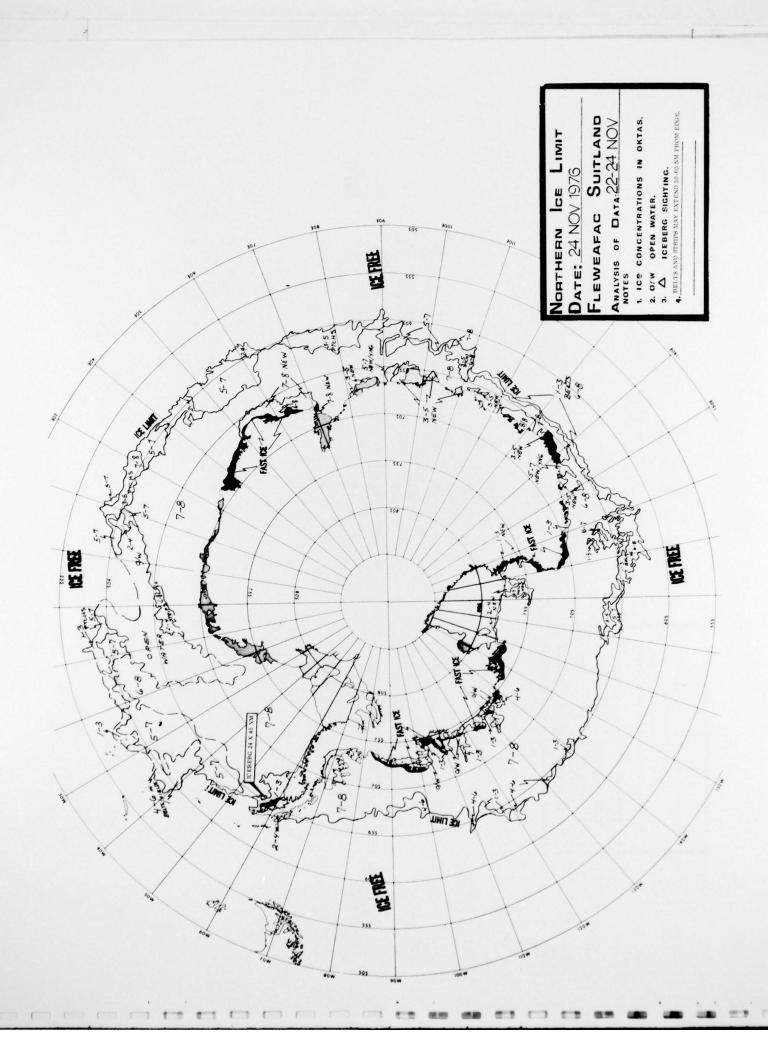


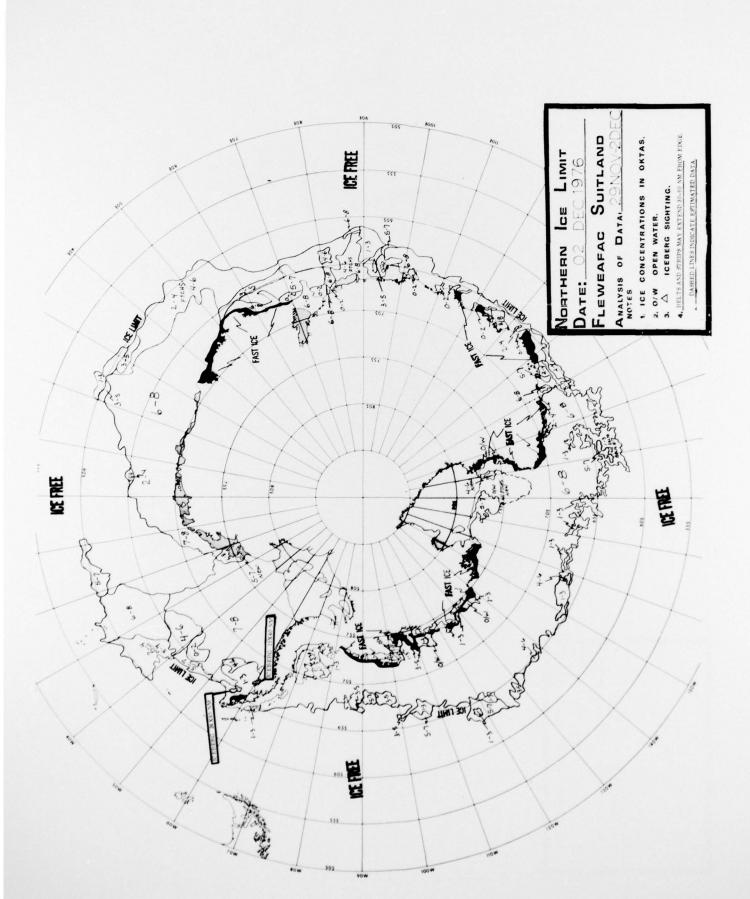


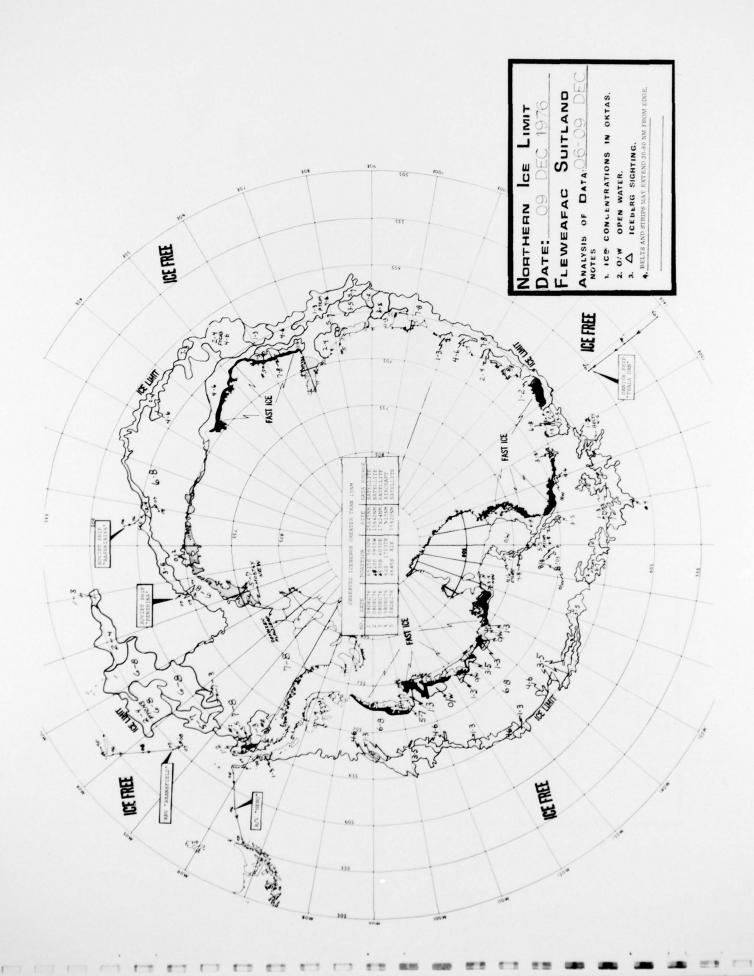
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FLEWEAFAC SUITLAND 1. ICE CONCENTRATIONS IN OKTAS. ANALYSIS OF DATA 15-18 NOV NOTES NORTHERN ICE LIMIT DATE: 18 NOV 1976 ICEBERG SIGHTING. 2. O/W OPEN WATER. 2-18 SE FREE DE PREE







FLEWEAFAC SUITLAND 1. ICE CONCENTRATIONS IN OKTAS. ANALYSIS OF DATA: 13-16 DE ICEBERG SIGHTING. ICE FREE NORTHERN ICE OPEN WATER. ICE FREE DATE: ICE FREE ICE FREE

